Fiscal Research Program

AN ANALYSIS OF PLANT CLOSINGS IN GEORGIA'S TEXTILE AND APPAREL INDUSTRIES

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FRP Report No. 60
July 2001

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I. Introduction

The industrialization of the South was spurred by the migration of northern textile and apparel firms. The Census Bureau (*County Business Patterns*) reported that in 1949, in Georgia there were 98,721 workers employed in the textile industry and 29,637 workers employed in the apparel industry. Together, these two industries accounted for 48.8 percent of all manufacturing workers in Georgia. Employment in both industries increased until the mid to late 1970s. For 1979, the Census Bureau (*County Business Patterns*) reported that in Georgia there were 117,492 workers employed in the textile industry and 76,030 workers employed in the apparel industry. Together, these two industries accounted for 36.1 percent of all Georgia manufacturing workers. At that point, employment in both industries began to decline, and in 1997 there were 90,838 workers employed in the textile industry and 43,850 workers employed in the apparel industry. Together, these two industries accounted for 22.5 percent of all manufacturing workers in Georgia. The decline from 1979 to 1997 amounted to 22.7 percent for textiles and 42.3 percent for apparel.

The decline is not expected to stop. The Georgia Department of Labor has forecasted that by 2006 there will be a decline in Georgia of 1,160 textile workers and 16,730 apparel workers from the 1996 employment level. This amounts to a decline of 1.1 percent for textile workers and 40.5 percent for apparel workers.

Given this decline in the textile and apparel industries, it is important to develop an understanding of the issues associated with re-employment following a plant closing. First, there is a need to understand the existing workers' skills set, but only as a first and preliminary step in understanding and providing opportunities for these workers. Second, in order to most effectively assist affected workers, state officials need to better understand the impediments -- real or perceived -- that may inhibit re-employment, and tailor policy and programs accordingly. This study addressed the following questions:

- What are demographic characteristics of the workforce in the textile and apparel industries?
- What is the existing skill-set among textile and apparel workers?
- Is there demand for these skills among currently operating/expanding or new businesses?

- What has been the labor market experience of textile and apparel workers following a plant closing?
- What resources are currently available to assist dislocated workers in Georgia and what has been the experience with them in areas where firms have closed?

To address these questions we relied on existing industry and labor data and studies, but supplemented that information with six case studies of the textile and apparel industries in Georgia. Three primary sources of information were used:

- a review of existing plant and labor data;
- a review of labor-related literature and case studies; and
- mini-case studies.

Specifically, the research for this project was based on selected secondary data sources, including data from the U.S. Bureau of the Census, the U.S. Department of Labor, the Georgia Department of Labor, existing literature, and interviews. The latter are particularly important as a way of validating conclusions drawn from the literature. Using the Standard Industrial Classifications (SIC), data from secondary sources were limited to SIC codes 22 (textile mill products) and 23 (apparel and other textile products).

Primary data for the project were gathered via site visits and in-person or telephone interviews. Mini-cases were conducted in six communities where an apparel or textile plant had closed. The cases involved site visits and interviews with individuals in the communities. The individuals interviewed included: community leaders, regional representatives of Georgia Department of Industry, Trade and Tourism (GDITT), Department of Labor (DOL), and Department of Technical and Adult Education (DTAE), and local employment and social service agency personnel. In addition to the case studies, brief telephone surveys were conducted with personnel directors or plant managers of currently operating plants in textile and apparel industries to determine the availability of skilled workers in their area.

II. An Overview of the Textile and Apparel Industries

This section provides a statewide overview of the textile and apparel industries. In particular, the section presents an overview of the geographic location of the plants and workers in the two industries, and the demographic profile of the workforce in the two industries.

The apparel industry includes establishments producing clothing and fabricating products by cutting and sewing purchased woven or knit textile fabrics and related materials, such as leather, rubberized fabrics, plastics and furs. Also included are establishments that manufacture clothing by cutting and joining (for example, by adhesives) materials such as paper and nonwoven textiles. The textile industry includes establishments engaged in performing any of the following operations: (1) preparation of fiber and subsequent manufacturing of yarn, thread, braids, twine, and cordage; (2) manufacturing broadwoven fabrics, narrow woven fabrics, knit fabrics, and carpets and rugs from yarn; (3) dyeing and finishing fiber, yarn, fabrics, and knit apparel; (4) coating, waterproofing, or otherwise treating fabrics; (5) the integrated manufacture of knit apparel and other finished articles from yarn, and (6) the manufacture of felt goods, lace goods, nonwoven fabrics, and miscellaneous textiles.

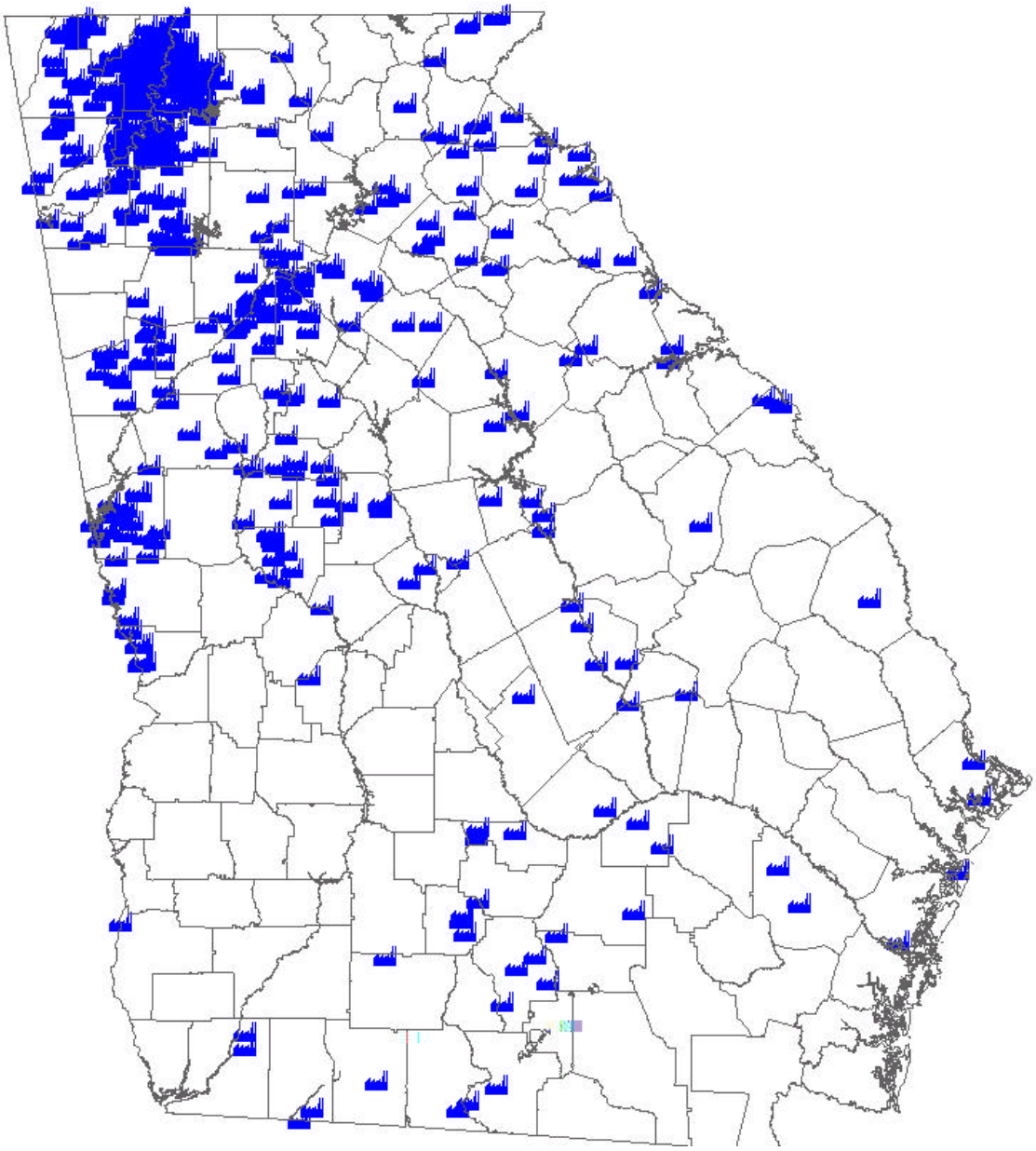
A. Location of Plants and Employment

The location of establishments in the two industries are shown in Maps 1 and 2.[1] Textile establishments are concentrated in the northern half of the state, particularly in the northwest corner of the state. Apparel establishments are located throughout the state, with a heavy concentration in the Atlanta metropolitan area.

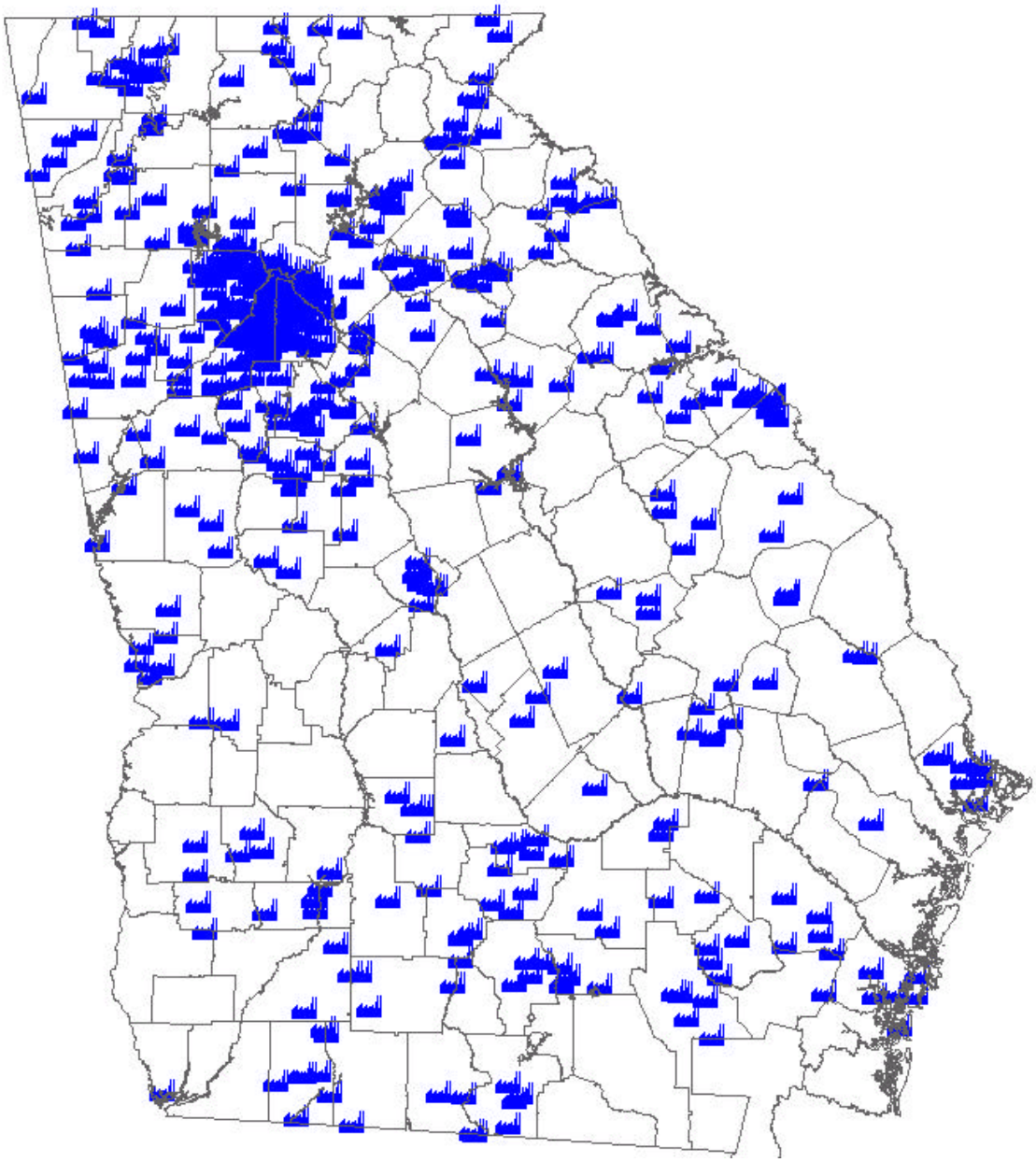
Maps 3 and 4 show the location of employment in the two industries. We aggregated employment in each zip code and use circles to represent employment, with each circle representing 20 or fewer employees. For the textile industry, the location of employees follows a pattern that is similar to the location of establishments, namely a concentration in the northern half of the state, particularly in

[1]These are actually individual accounts in the unemployment insurance files of the Georgia Department of Labor. In some cases, there are multiple accounts at one location. This might occur if there are different divisions housed at one location.

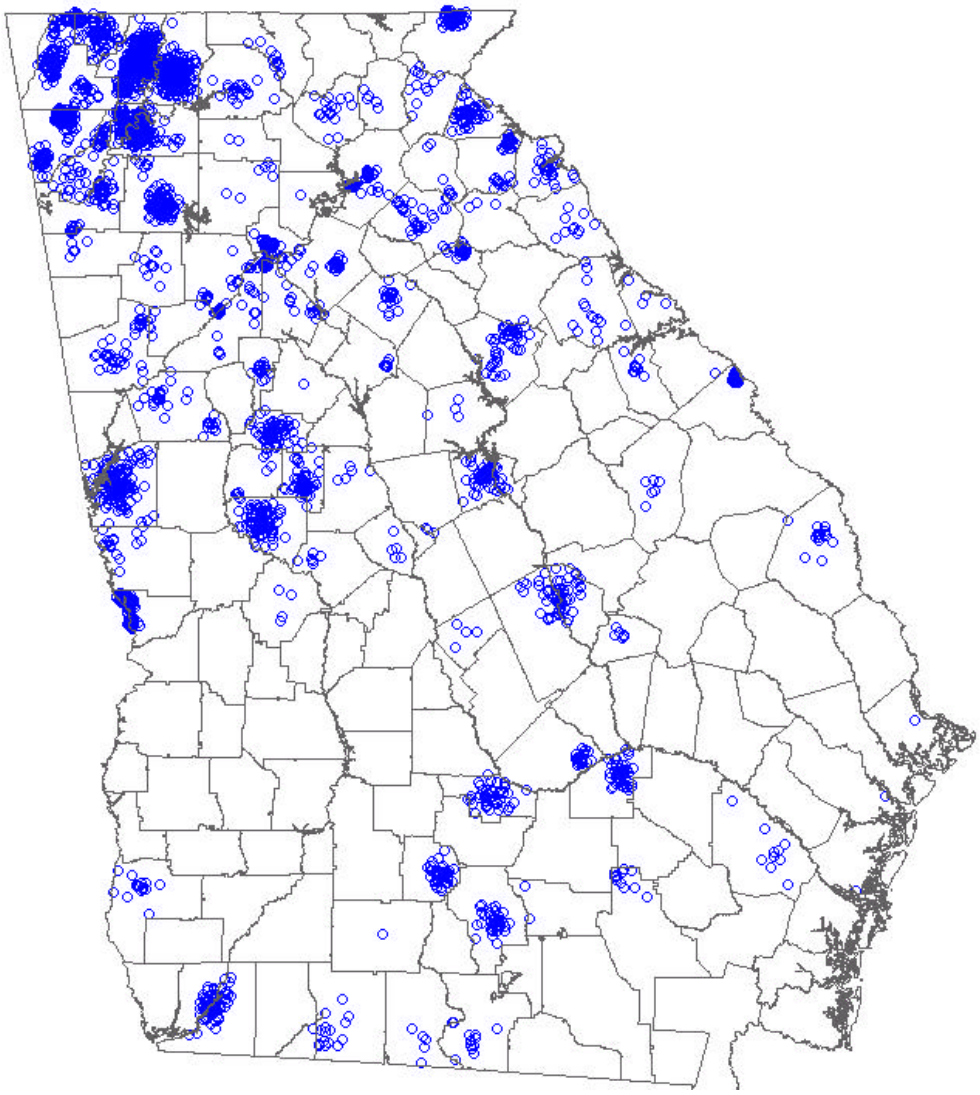
MAP 1: TEXTILE ESTABLISHMENTS BY ZIP CODE (1999)



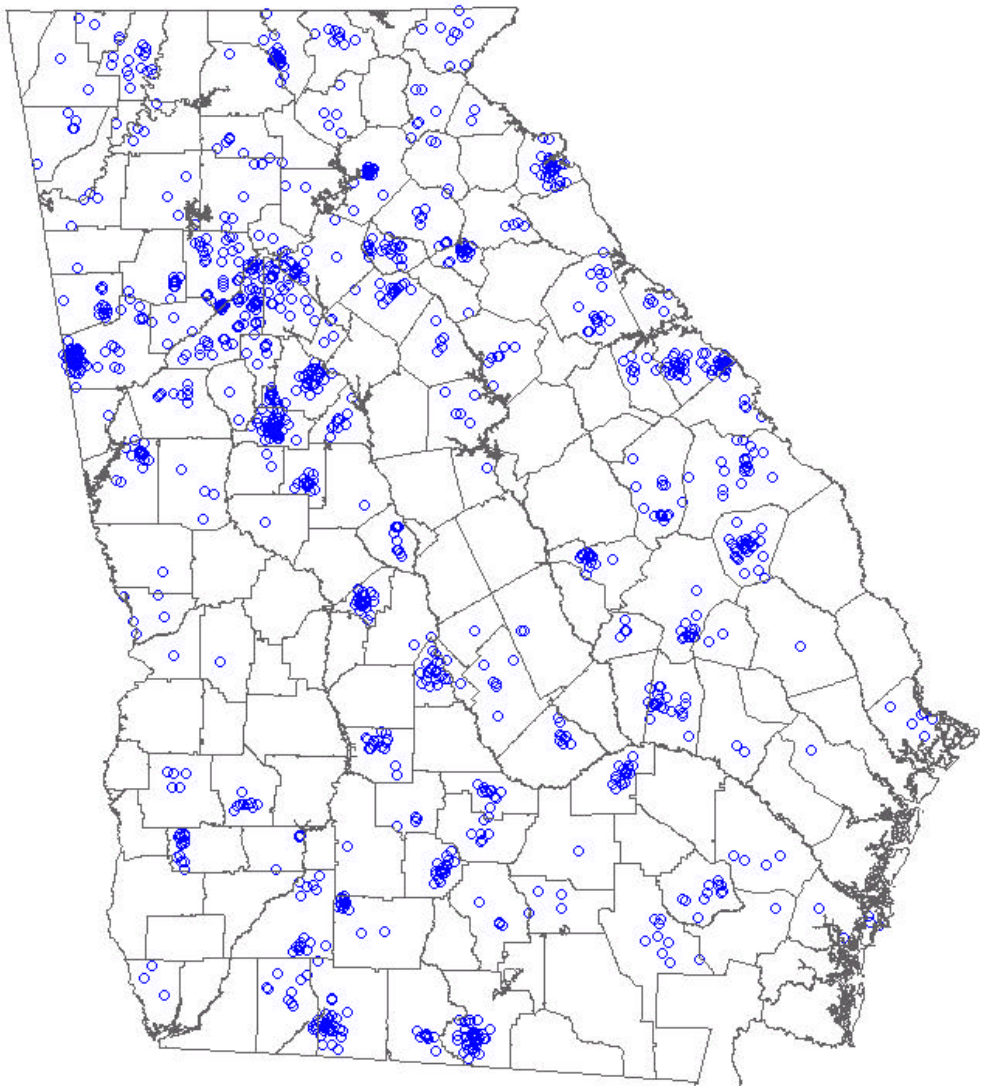
MAP 2: APPAREL ESTABLISHMENTS BY ZIP CODE (1999)



MAP 3: TEXTILE EMPLOYEES BY ZIP CODE (1999)
(Each symbol represents 20 or fewer employees)



MAP 4: APPAREL EMPLOYEES BY ZIP CODE (1999)
(Each symbol represents 20 or fewer employees)



the northwest corner. For the apparel industry, employment is distributed more evenly across the state; the concentration of establishments in the Atlanta metropolitan area is not reflected as heavily with employment. Presumably, the establishments in the Atlanta metropolitan area are smaller than average, and are more likely to be headquarter offices rather than manufacturing plants.

The maps were constructed using data from the Department of Labor, in particular the unemployment insurance file, known as the ES 202 data. We first identified the location (by zip code) of each establishment in the textile (SIC 22) and apparel (SIC 23) industries as of the third quarter 1999. We then mapped these data by zip code. We also had unpublished data from Dun and Bradstreet and the data from the 1998 Georgia Survey of Manufacturing. These data are older than the ES 202 data, but they show similar geographic patterns. (A more recent version of the Georgia Survey of Manufacturing is now available.)

B. Demographics of Georgia Labor Force

Table 1 presents estimates for 1998 of the demographic characteristics of the labor force in Georgia's textile and apparel industries along with that of the total Georgia labor force. The distribution for the characteristics had to be estimated since demographic information beyond 1990 does not allow detailed analysis by industry. For each of the categories reported in Table 1, we started with distributions calculated from the Public Use Microdata Sample (PUMS) of the 1990 Census of Population. Using Current Population Report microdata for 1990 and for 1998 (the latest year available), we determined at the national level for each of the two industries the change in the distributions for each characteristic. We then adjusted the 1990 distributions for Georgia to arrive at the estimated 1998 distributions. The changes in the distributions between 1990 and 1998 were small, except for earnings, which of course reflects wage growth. For the state labor force, we used the Georgia observations in the 1998 Current Population Survey (this sample is large enough to develop statistically reliable distributions for the entire state labor force, but not for workers in the textiles and apparel industries).

TABLE 1. DEMOGRAPHICS OF GEORGIA LABOR FORCE[1]

Demographic Characteristics	1998 Textiles	1998 Apparel	1998 All Georgia Workers
Age			
Under 21	0.97%	3.89%	7.72%
21-35	41.52	36.40	35.66
36-45	19.80	26.39	25.47
46-55	19.86	17.90	20.38
56-64	11.11	7.76	6.66
65 and over	6.74	4.66	4.11
Sum	100.00	100.00	100.00
Race			
White	68.61	55.06	70.91
Black	25.48	43.74	27.36
Other	5.91	1.20	1.73
Sum	100.00	100.00	100.00
Sex			
Male	51.42	24.65	51.60
Female	48.58	75.35	48.40
Sum	100.00	100.00	100.00
Income			
$0-$10,000	17.90	38.77	27.28
$10,000-$20,000	36.89	41.49	21.59
$20,000-$30,000	27.22	11.18	17.92
$30,000-$50,000	12.42	3.40	22.12
$50,000 or more	5.57	5.15	11.09
Sum	100.00	99.99	100.00

Demographic Characteristics	1998 Textiles	1998 Apparel	1998 All Georgia Workers
Marital Status			
Married	71.31%	61.60%	56.86%
Not Married	28.69	38.40	43.14
Sum	100.00	100.00	100.00
Occupation			
Professional	8.42	7.94	25.97
Technical	14.60	9.15	29.66
Service	1.84	4.37	13.56
Production and Craft	18.57	7.24	10.93
Operators	56.57	71.29	16.93
Sum	100.00	99.99	97.05[2]
Education			
12th grade or less	38.66	40.57	17.34
High School	40.12	40.34	34.84
Some college	14.79	11.06	25.64
Bachelor's degree	5.52	7.08	15.37
Master's degree or more	0.91	0.95	6.82
Sum	100.00	100.00	100.01

[1]Sources 1990 *Public Use Microdata Sample*, 1990 and 1998 *Current Population Survey*.
[2]Approximately 3 percent of all Georgia workers are in farming or the military. These categories are excluded in order to be comparable to the data in apparel and textiles.

We make the following observations regarding the demographics of the labor forces.

AGE

- There are relatively fewer workers in textiles and apparel under 21 years of age than in the labor force. This is not surprising since SIC 22 and SIC 23 are manufacturing operations and there are fewer part-time jobs than in sectors such as retailing and services.

- Workers in textiles and apparel are somewhat older than the entire labor force, particularly in textiles.

RACE

- In textiles, there is a substantially larger percentage of the workers who are classified as "other," i.e., non-black minorities, but the percentage is still relatively small at 6.9 percent.

- In apparel, a much larger percentage of the workers are classified as black than for the entire labor force.

GENDER

- In textiles, the division between males and females closely matches the split for the entire labor force.

- In apparel, 3/4th of the work force is female, a percentage that is over 50 percent larger than for the labor force as a whole.

EARNINGS

- Relative to the entire labor force, a larger percentage of workers in textiles have earnings between $10,000 and $30,000.

- Over 80 percent of textiles workers had earnings of less than $20,000 compared with 49 percent of the entire labor force and 54 percent for textile workers.

MARITAL STATUS

- Probably reflecting the near absence of anyone under 21, a larger percentage of the work force in textiles and apparel are married than for the entire labor force.

- Textiles workers are about 20 percent more likely to be married than the entire labor force.

OCCUPATION

- Textile and apparel workers are primarily classified as operators; for apparel, 71 percent of the workers are operators compared with 17 percent for the entire labor force.

EDUCATION

- The education levels of workers employed in textiles and apparel industries are similar, and are low when compared with the entire labor force. Approximately 40 percent of textiles and apparel workers do not have a high school degree, compared with 17 percent for the entire labor force.

In Section VI, which contains a discussion of specific plant closings, demographic data is provided for the workers at those plants. Those data track the information presented above.

III. Inventory of Existing Job Skills

It is not possible to accurately document existing job skills among specific groups of textile and apparel workers in Georgia without gathering individual-level data. However, there are two important job classification databases available that provide useful job skill information for the textile and apparel industries. The first is the *Occupational Employment Survey* (OES), conducted annually by the Georgia Department of Labor in agreement with the U.S. Department of Labor. Data from this survey are especially useful for identifying occupations by SIC Code (Standard Industrial Classification.) This allows cross-checking of occupations to determine which occupations are relevant to which industry, thereby allowing identification of occupations relevant to the textile and apparel industries. A second important source for job classification information is the O*NET™1.0 database, sponsored by the U.S. Department of Labor's Employment and Training Administration.[2] This newly developed database contains comprehensive information on job requirements and worker competencies and replaces the Dictionary of Occupational Titles. O*NET™ 1.0 database is described as

> … a comprehensive database of worker attributes and job characteristics. As the replacement for the Dictionary of Occupational Titles (DOT), O*NET™1.0 will be the nation's primary source of occupational information. O*NET™1.0 is being developed as a timely, easy-to-use resource that supports public and private sector efforts to identify and develop the skills of the American workforce. It provides a common language for defining and describing occupations. …. The database contains information about knowledge, skills, abilities (KSAs), interests, general work activities (GWAs), and work context. O*NET™1.0 data and structure will also link related occupational, educational, and labor market information databases to the system.…. O*NET™1.0 offers a common language for

[2] There is a newer version of this database, which is available at http://www.doleta.gov/prgrams/onet, than when we conducted this research.

communication across the economy and among work force development efforts.[3]

The O*NET^{TM}1.0 database does not allow identification of occupations by SIC code, but using it together with the Georgia OES survey, we can develop a detailed listing of required skill and knowledge for each of the key occupations in the textile and apparel industries (SIC 22 and 23.) Table 2 provides a comprehensive listing of skills and knowledge for occupations in the textile and apparel industries. Overall, there is a great deal of similarity across occupations, but with some exceptions. Most of the occupations are manual labor jobs, typically involving on-the-job training. The O*NET^{TM}1.0 dataset is especially useful as it breaks out skills and knowledge separately. Understanding the knowledge needs of occupations in textile and apparel firms and comparing those needs for other occupations can be useful in planning training and career assistance.

Another important aspect of understanding the occupations of textile and apparel workers is the relative complexity of the occupation itself in relation to other occupations. Again, O*NET^{TM}1.0 dataset provides important information on the skill levels required for all OES occupations, using the following "Job Zones" classification system:

- Job Zone One: Little or No Preparation Needed
- Job Zone Two: Some Preparation Needed
- Job Zone Three: Medium Preparation Needed
- Job Zone Four: Considerable Preparation Needed
- Job Zone Five: Extensive Preparation Needed

For example, for the textile job with the most employees (>5700) in Georgia *(Textile Machine Operators and Tenders- Winding, Twisting, Knitting, Weaving, and Cutting)*, the O*NET^{TM}1.0 database provides the information in Figure 1. Overall, the

[3] O*NET^{TM}1.0 (Occupational Information Network), http://www.doleta.gov/programs/onet/index.htm#return.

TABLE 2. KEY TEXTILE INDUSTRY OCCUPATIONS AND SKILLS AND KNOWLEDGE REQUIRED

OES Code	Occupation Title	O*NET™ 1.0 Job Zone	Skills Required	Knowledge Required
92702*	Textile machine setters	3	* Operation and Control -- Controlling operations of equipment or systems * Testing -- Conducting tests to determine whether equipment, software, or procedures are operating as expected * Repairing -- Repairing machines or systems using the needed tools * Operation Monitoring -- Watching gauges, dials, or other indicators to make sure a machine is working properly * Equipment Maintenance -- Performing routine maintenance and determining when and what kind of maintenance is needed * Installation -- Installing equipment, machines, wiring, or programs to meet specifications * Troubleshooting -- Determining what is causing an operating error and deciding what to do about it * Reading Comprehension -- Understanding written sentences and paragraphs in work related documents * Problem Identification -- Identifying the nature of problems	* Mechanical -- Knowledge of machines and tools, including their designs, uses, benefits, repair, and maintenance
92705*	Textile machine operators, wind/twist/knit/weave/cut	1	* Product Inspection -- Inspecting and evaluating the quality of products * Operation and Control -- Controlling operations of equipment or systems * Operation Monitoring -- Watching gauges, dials, or other indicators to make sure a machine is working properly * Problem Identification -- Identifying the nature of problems	* Production and Processing -- Knowledge of inputs, outputs, raw materials, waste, quality control, costs, and techniques for maximizing the manufacture and distribution of goods * Mechanical -- Knowledge of machines and tools, including their designs, uses, benefits, repair, and maintenance
92708*	Extruding/forming machine operators, synthetic/glass	1	* Operation and Control -- Controlling operations of equipment or systems * Operation Monitoring -- Watching gauges, dials, or other indicators to make sure a machine is working properly * Equipment Maintenance -- Performing routine maintenance and determining when and what kind of maintenance is needed * Equipment Selection -- Determining the kind of tools and equipment needed to do a job * Product Inspection -- Inspecting and evaluating the quality of products * Repairing -- Repairing machines or systems using the needed tools	* Mechanical -- Knowledge of machines and tools, including their designs, uses, benefits, repair, and maintenance * Production and Processing -- Knowledge of inputs, outputs, raw materials, waste, quality control, costs, and techniques for maximizing the manufacture and distribution of goods

OES Code	Occupation Title	O*NET™ 1.0 Job Zone	Skills Required	Knowledge Required
92711	Textile draw out machine operators and tenders	1	* Operation and Control -- Controlling operations of equipment or systems * Operation Monitoring -- Watching gauges, dials, or other indicators to make sure a machine is working properly * Product Inspection -- Inspecting and evaluating the quality of products * Reading Comprehension -- Understanding written sentences and paragraphs in work related documents * Equipment Maintenance -- Performing routine maintenance and determining when and what kind of maintenance is needed * Troubleshooting -- Determining what is causing an operating error and deciding what to do about it	* Production and Processing -- Knowledge of inputs, outputs, raw materials, waste, quality control, costs, and techniques for maximizing the manufacture and distribution of goods
92714*	Textile bleaching and dyeing machine operators	1	* Operation and Control -- Controlling operations of equipment or systems * Product Inspection -- Inspecting and evaluating the quality of products * Operation Monitoring -- Watching gauges, dials, or other indicators to make sure a machine is working properly * Mathematics -- Using mathematics to solve problems	* Production and Processing -- Knowledge of inputs, outputs, raw materials, waste, quality control, costs, and techniques for maximizing the manufacture and distribution of goods * Chemistry -- Knowledge of the composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods * Mechanical -- Knowledge of machines and tools, including their designs, uses, benefits, repair, and maintenance
92717*	Sewing machine operators, garment	1	* Product Inspection -- Inspecting and evaluating the quality of products * Operation and Control -- Controlling operations of equipment or systems * Operation Monitoring -- Watching gauges, dials, or other indicators to make sure a machine is working properly * Equipment Selection -- Determining the kind of tools and equipment needed to do a job * Monitoring -- Assessing how well one is doing when learning or doing something * Equipment Maintenance -- Performing routine maintenance and determining when and what kind of maintenance is needed	* Production and Processing -- Knowledge of inputs, outputs, raw materials, waste, quality control, costs, and techniques for maximizing the manufacture and distribution of goods

OES Code	Occupation Title	O*NET™ 1.0 Job Zone	Skills Required	Knowledge Required
92721*	Sewing machine operators, non-garment	1	* Product Inspection -- Inspecting and evaluating the quality of products * Operation and Control -- Controlling operations of equipment or systems	* Mechanical -- Knowledge of machines and tools, including their designs, uses, benefits, repair, and maintenance * Production and Processing -- Knowledge of inputs, outputs, raw materials, waste, quality control, costs, and techniques for maximizing the manufacture and distribution of goods
92723	Shoe sewing machine operators and tenders	1	* Operation and Control -- Controlling operations of equipment or systems * Product Inspection -- Inspecting and evaluating the quality of products * Equipment Selection -- Determining the kind of tools and equipment needed to do a job * Reading Comprehension -- Understanding written sentences and paragraphs in work related documents	* Production and Processing -- Knowledge of inputs, outputs, raw materials, waste, quality control, costs, and techniques for maximizing the manufacture and distribution of goods
92726	Laundry and dry-cleaning machine operators and tenders, except pressing	1	* Operation and Control -- Controlling operations of equipment or systems * Product Inspection -- Inspecting and evaluating the quality of products * Operation Monitoring -- Watching gauges, dials, or other indicators to make sure a machine is working properly * Equipment Maintenance -- Performing routine maintenance and determining when and what kind of maintenance is needed	* Customer and Personal Service -- Knowledge of principles and processes for providing customer and personal services including needs assessment techniques, quality service standards, alternative delivery systems, and customer satisfaction evaluation techniques
92728	Pressing machine operators and tenders – textile, garment and related materials	1	* Product Inspection -- Inspecting and evaluating the quality of products * Operation Monitoring -- Watching gauges, dials, or other indicators to make sure a machine is working properly * Equipment Selection -- Determining the kind of tools and equipment needed to do a job * Installation -- Installing equipment, machines, wiring, or programs to meet specifications * Information Gathering -- Knowing how to find information and identifying essential information * Problem Identification -- Identifying the nature of problems * Monitoring -- Assessing how well one is doing when learning or doing something * Equipment Maintenance -- Performing routine maintenance and determining when and what kind of maintenance is needed * Reading Comprehension -- Understanding written sentences and paragraphs in work related documents	* Chemistry -- Knowledge of the composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods

**** = This occupation is among the top ten occupations in either SIC Code 22 or 23 in Georgia.***

required skill level for most occupations in the apparel and textile industries is quite low, primarily rated at O*NET^{TM}1.0's Job Zone One, indicating no, or little, preparation required to be eligible for the job. The one exception to this is for "textile machine setters," rated at Job Zone Three, which requires some vocational training or even a bachelor's degree. The overall low education and preparation requirements suggest that these jobs may be filled with individuals in a local population without regard for prior employment or training.

While Table 2 provides information on the most central and industry-specific occupations in the textile and apparel industries, it is also useful to examine skill and occupation information for the occupations in Georgia that employ the most people in textile and apparel. Using information gathered in the 1998 Georgia OES study, combined with occupational descriptions drawn from the O*NET^{TM}1.0 database, Table 3 lists the *top ten* occupations in terms of employment in the textile and in the apparel industries in Georgia and the corresponding skills along with O*NET^{TM}1.0's job skill rating. This listing includes most of the core jobs listed above in Table 2, as well as other support and management jobs, such as freight handlers, packers, supervisors, and managers. As above, the overall skill and knowledge requirements for these occupations are low, with few of the top ten jobs in the textile and apparel industries requiring even a high-school education (with the obvious exception of top management.) This is consistent with the demographic information contained in Table 1. This supports our conclusion that due to the low skill requirements, absent additional training or education, workers ought to be able to move to similarly low-skilled jobs in other industries.

Information is also provided in Table 3 on projected increases and decreases in employment for these occupations in all industries, at the national level, and for Georgia specifically. While many of these occupations are declining at both levels, some occupations show a faster growth rate in Georgia than for the U.S. overall. For example, occupation 92708 "extruding/forming machine operators," although a key textile industry occupation, was projected to grow 34.4 percent from 1996-2006. Given the projected decline in employment in the textile and apparel industries, the growth in this occupation will be other industries. This points to the importance of viewing the future of textile and apparel workers not only by their industry, but also by their occupation in order to assess potential, future job placements.

FIGURE 1. O*NET™1.0 EXAMPLE

**O*NET™1.0 Experience Profile: Experience Requirements 92705 –
Textile Machine Operators and Tenders
Winding, Twisting, Knitting, Weaving, and Cutting**

To help you understand how much preparation is needed to perform this occupation, it has been placed into one of five Job Zones. A Job Zone summarizes the experience, education and training usually required for an occupation.

JOB ZONE ONE: LITTLE OR NO PREPARATION NEEDED

EXPERIENCE:

No previous work-related skill, knowledge, or experience is needed for these occupations. For example, a person can become a general office clerk even if he/she has never worked in an office before.

EDUCATION:

These occupations may require a high school diploma or GED certificate. Some may require a formal training course to obtain a license.

JOB TRAINING:

Employees in these occupations need anywhere from a few days to a few months of training. Usually, an experienced worker could show you how to do the job.

JOB ZONE 1 EXAMPLES:

These occupations involve following instructions and helping others. Examples include bus drivers, forest and conservation workers, general office clerks, home health aides, and waiters/waitresses.

APPRENTICESHIP:

Employment in this occupation may be entered through participation in a registered apprenticeship program. See the AIMS Crosswalk and the BAT Apprenticeable Occupations for more information.

TABLE 3. TOP TEN TEXTILE AND APPAREL JOBS IN GEORGIA: SKILL LEVEL AND EMPLOYMENT PROJECTIONS

OES Code	Occupation Title	Number Of Employees	O*NET™ 1.0 Job Zone	Expected changes by 2006		
				U.S. Overall		Georgia
				Change in Employment	Overall Industry Replacement Rate: Expected % of Job Openings Due to Turnover	Change in Employment
A. SIC 22: Textile mill products						
92705	Textile machine operators, wind/twist/knit/weave/cut	5842	1	-15.4%	17%	-7.7%
92702	Textile machine setters	1127	3	-34.4%	17%	-30.3%
85112	Machinery maintenance mechanics, textile machines	833	2	+6.6%	22%	+26.9%

OES Code	Occupation Title	Number Of Employees	O*NET™ 1.0 Job Zone	Expected changes by 2006		
				U.S. Overall		Georgia
				Change in Employment	Overall Industry Replacement Rate: Expected % of Job Openings Due to Turnover	Change in Employment
92714	Textile bleaching and dyeing machine operators	747	1	+10%	15%	+15.1%
92717	Sewing machine operators, garment	652	1	-26.1%	16%	-46.7%
98799	Freight, stock, and material movers, hand	624	1	+5.1%	36%	+20.5%
83005	Production inspectors, test/grade/sort/sample/weigh	606	1	-3.8%	18%	-2.1%

OES Code	Occupation Title	Number Of Employees	O*NET™ 1.0 Job Zone	Expected changes by 2006		
				U.S. Overall		Georgia
				Change in Employment	Overall Industry Replacement Rate: Expected % of Job Openings Due to Turnover	Change in Employment
81008	First line supervisors, production and operating	515	3	+2.5%	22%	+5.9%
92721	Sewing machine operators, non-garment	416	1	-1.9%	16%	-3.3%
92708	Extruding/forming machine operators, synthetic/glass	403	1	+9.7%	18%	+34.4%
SIC 23: Apparel and other textile products						
92717	Sewing machine operators, garment	2812	1	-26.1%	16%	-46.7%

OES Code	Occupation Title	Number Of Employees	O*NET™ 1.0 Job Zone	Expected changes by 2006		
				U.S. Overall		Georgia
				Change in Employment	Overall Industry Replacement Rate: Expected % of Job Openings Due to Turnover	Change in Employment
92721	Sewing machine operators, non-garment	591	1	-1.9%	16%	-3.3%
93956	Assemblers/fabricators except machine/electronic/precision	195	1	+1.3%	19%	+12.7%
98902	Hand packers and packagers	186	1	+22.5%	27%	+41.7%
81008	First line supervisors, production and operating	171	3	+2.5%	22%	+5.9%

OES Code	Occupation Title	Number Of Employees	O*NET™ 1.0 Job Zone	Expected changes by 2006		
				U.S. Overall		Georgia
				Change in Employment	Overall Industry Replacement Rate: Expected % of Job Openings Due to Turnover	Change in Employment
83005	Production inspectors, test/grade/sort/sample/weigh	140	1	-3.8%	18%	-2.1%
98799	Freight, stock, and material movers, hand	135	1	+5.1%	36%	+20.5%
93926	Cutters and trimmers, hand	115	1	+3.9%	24%	-2.2%
19005	General managers and top executives	90	5	+14.6%	21%	+28.3%
58028	Traffic, shipping, and receiving clerks	85	1	+8.5%	15%	+27.0%

In any industry there are a range of support positions that are relevant to most other industries. These positions include clerical jobs, warehouse hauling and lifting, janitorial, security, among others. However, there are some positions that are central to the textile and apparel industries. These occupations are listed in Table 4. (Note that not all of these positions are in the top ten occupations in Georgia's textile and apparel industries.) While individuals with clerical and other jobs common to many industries may be able to move more easily from one industry to another, a concern of this study is the ability of textile and apparel workers to find jobs following plant closings or downsizing. Again, using the Georgia OES study along with the O*NET^{TM}1.0 database, Table 4 lists these typical occupations, including a description, that are central to the textile and apparel industries, and indicates in which *other* industries (as defined by SIC codes) these occupations also appear. While the textile and apparel industries are experiencing a dramatic decline in Georgia, all but one (leather and leather products) of the other industries in which textile and apparel occupations appear are expected to grow, as shown in Table 5. Using this information, it is clear that for most textile and apparel industry jobs in Georgia, jobs with similar skill requirements not only exist in several other industries, but that the outlook for those industries is positive.

It is useful to know which skills and occupations allow workers to move from one industry to another. However, another relevant question is, *are there other occupations for which apparel and textile workers may be particularly suited?* Again, the O*NET^{TM}1.0 database is useful for identifying similar or related occupations that require skills similar to those in textile and apparel jobs. As shown in Table 6, for each textile and apparel occupation there are several non-textile occupations that may offer employment opportunities. Based on the close relationship between skills in these sets of occupations, as well as the fact that most of these occupations are very low skilled jobs requiring little or no preparation, we may conclude that workers skilled in any of these areas may fairly easily move between apparel and textile jobs and other similarly low-skilled occupations.

TABLE 4. KEY TEXTILE AND APPAREL INDUSTRY OCCUPATIONS AND ADDITIONAL SIC CODES IN WHICH THESE OCCUPATIONS OCCUR

OES Code	Occupation Title	Occupation Description	Additional SIC Codes In Which Occupations Occur
92702*	Textile machine setters	Set up or set up and operate textile machines that perform textile processing and manufacturing operations, such as winding, twisting, knitting, weaving, bonding, and stretching.	28: Chemicals and allied products 30: Rubber and miscellaneous plastics products, 31: Leather and leather products 32: Stone, clay, glass, and concrete products
92705*	Textile machine operators, wind/twist/knit/weave/cut	Operate or tend textile machines that perform textile processing and manufacturing operations, such as winding, twisting, knitting, weaving, and cutting, using knowledge of machine functions. Exclude textile sewing machine operators and tenders.	24: Lumber and wood products 28: Chemicals and allied products, 30: Rubber and miscellaneous plastics products, 31: Leather and leather products, 32: Stone, clay, glass, and concrete products
92708*	Extruding/forming machine operators, synthetic/glass	Operate or tend machines that extrude and form continuous filaments from synthetic materials, such as liquid polymer, rayon, and fiberglass, preparatory to further processing.	28: Chemicals and allied products, 31: Leather and leather products 32: Stone, clay, glass, and concrete products
92711	Textile draw out machine operators and tenders	Operate or tend machines, such as slubber machines and drawing frames, that draw out and combine sliver, such as wool, hemp, synthetic, and blended sliver, preparatory to further processing.	28: Chemicals and allied products
92714*	Textile bleaching and dyeing machine operators	Operate or tend machines, such as padding machines, treating tanks, dye jigs, and vats, to bleach, shrink, wash, dye, and finish textiles, such as cloth, yarn, greige cloth, and fiberglass sliver, preparatory to further processing.	-----

OES Code	Occupation Title	Occupation Description	Additional SIC Codes In Which Occupations Occur
92717*	Sewing machine operators, garment	Operate or tend sewing machines to perform garment sewing operations, such as joining, reinforcing, or decorating garments or garment parts. Include sewing machine operators and tenders who perform specialized or automatic sewing machine functions, such as buttonhole making or tacking.	30: Rubber and miscellaneous plastics products, 31: Leather and leather products 39: Miscellaneous Mfg. 50: Wholesale trade--durable goods 72: Personal services
92721*	Sewing machine operators, non-garment	Operate or tend sewing machines to join together, reinforce, decorate, or perform related sewing operations in the manufacture of non-garment products, such as upholstery, draperies, linens, carpets, and mattresses.	24: Lumber and wood products 30: Rubber and miscellaneous plastics products, 31: Leather and leather products 37: Transportation equipment 38: Instruments and related products 39: Miscellaneous manufacturing industries 50: Wholesale trade--durable goods 72: Personal services 75: Automotive repair, services, and parking
92723	Shoe sewing machine operators and tenders	Operate or tend single, double, or multiple-needle stitching machine to join or decorate shoe parts, to reinforce shoe parts, or to attach buckles.	30: Rubber and miscellaneous plastics products, 31: Leather and leather products 72: Personal services
92726	Laundry and dry-cleaning machine operators and tenders, except pressing	Operate or tend washing or dry-cleaning machines to wash or dry-clean commercial, industrial, or household articles, such as cloth garments, suede, leather, furs, blankets, draperies, fine linens, rugs, and carpets.	70: Hotels, rooming houses, camps, and other 72: Personal services 79: Amusement and recreational services 80: Health Services 83: Social Services

OES Code	Occupation Title	Occupation Description	Additional SIC Codes In Which Occupations Occur
92728	Pressing machine operators and tenders – textile, garment and related materials	Operate or tend pressing machines, such as hot-head pressing, steam pressing, automatic pressing, ironing, plunger pressing, and hydraulic pressing machines, to press and shape articles such as leather, fur, and cloth garments, drapes, slipcovers, handkerchiefs, and millinery. Exclude delicate fabric (precision) pressers.	72: Personal services 80: Health Services 81: Legal Services
**** = This occupation is among the top ten occupations in either SIC Code 22 or 23 in Georgia.***			

TABLE 5. ADDITIONAL SIC CODES WHERE TEXTILE AND APPAREL OCCUPATIONS OCCUR AND THEIR EXPECTED CHANGES IN EMPLOYMENT BY 2006

Industry	% Change by 2006
Textile and Apparel Industries	
SIC 22:Textile mill products	-1.1
SIC 23: Apparel & other textile products	-40.5
Other Industries	
SIC 24: Lumber and wood products	14.8
SIC 28: Chemicals and allied products	14.5
SIC 30: Rubber & misc plastics products	16.6
SIC 31: Leather and leather products	-5.8
SIC 32: Stone, clay, glass, & concrete products	9.9
SIC 37: Transportation equipment	4.4
SIC 38: Instruments and related products	7.4
SIC 39: Misc mfg industries	5.8
SIC 50: Wholesale trade--durable goods	16
SIC 70: Hotels and other lodging	16.3
SIC 72: Personal services	14.7
SIC 75: Auto repair, services, & parking	44.9
SIC 79: Amusement and recreation services	49.6
SIC 80: Health Services	45.3
SIC 81: Legal Services	35.4
SIC 83: Social Services	62.3

Source: GA DOL Report "Planning for Tomorrow: Industry and Occupational Outlook."

TABLE 6. TEXTILE AND APPAREL INDUSTRY OCCUPATIONS AND THEIR RELATED OCCUPATIONS

Textile Occupation	Related Occupation Listed in O*NET™1.0 Database
92702*	Tool Grinders, Filers, Sharpeners, and Other Precision Grinders (89111) Forging Machine Setters and Set-Up Operators, Metal and Plastic (91317) Numerical Control Machine Tool Operators and Tenders, Metal and Plastic (91502) Press and Press Brake Machine Setters and Set-Up Operators, Metal and Plastic (91305) Patternmakers, Metal and Plastic (89114B) Shear and Slitter Machine Setters and Set-Up Operators, Metal and Plastic (91308) Cooling and Freezing Equipment Operators and Tenders (92928) Drilling and Boring Machine Tool Setters and Set-Up Operators, Metal and Plastic (91108) Grinding, Honing, Lapping, and Deburring Machine Set-Up Operators (91114A) Combination Machine Tool Operators and Tenders, Metal and Plastic (91508)
92705*	Engraver Set-Up Operators (92529D) Coil Winders, Tapers, and Finishers (93908) Grinding, Honing, Lapping, and Deburring Machine Set-Up Operators (91114A) Machine Tool Cutting Operators and Tenders, Metal and Plastic (91117) Textile Draw-Out Machine Operators and Tenders (92711) Paper Goods Machine Setters and Set-Up Operators (92914) Conveyor Operators and Tenders (97951) Cleaning, Washing, and Pickling Equipment Operators and Tenders (92958)
92708*	Textile Draw-Out Machine Operators and Tenders (92711) Electronic Semiconductor Wafer Etchers and Engravers (92902B) Letterpress Setters and Set-Up Operators (92515) Separating, Filtering, Clarifying, Precipitating, and Still Machine Operators and Tenders (92962) Soldering and Brazing Machine Operators and Tenders (91711) Embossing Machine Set-Up Operators (92529A) Electronic Semiconductor Sawyers, Abraders, and Polishers (92902E) Coil Winders, Tapers, and Finishers (93908) Molding and Casting Workers (93944D) Conveyor Operators and Tenders (97951)
92711	Embossing Machine Set-Up Operators (92529A) Foundry Mold Assembly and Shakeout Workers (91914) Extruding and Forming Machine Operators and Tenders, Synthetic or Glass Fibers (92708) Electronic Semiconductor Wafer Etchers and Engravers (92902B) Molding and Casting Workers (93944D) Electrolytic Plating and Coating Machine Setters and Set-Up Operators, Metal and Plastic (91917) Mold Makers, Hand (93944A) Cleaning, Washing, and Pickling Equipment Operators and Tenders (92958)

Textile Occupation	Related Occupation Listed in O*NET™1.0 Database
	Portable Machine Cutters (93928)
	Letterpress Setters and Set-Up Operators (92515)
92714*	Coating, Painting, and Spraying Machine Setters and Set-Up Operators (92951)
	Heat Treating, Annealing, and Tempering Machine Operators and Tenders, Metal and Plastic (91932)
	Plastic Molding and Casting Machine Setters and Set-Up Operators (91902)
	Welding Machine Operators and Tenders (91705)
	Design Printing Machine Setters and Set-Up Operators (92522A)
	Laundry and Drycleaning Machine Operators and Tenders, Except Pressing (92726)
	Coating, Painting, and Spraying Machine Operators and Tenders (92953)
	Textile Machine Operators and Tenders- Winding, Twisting, Knitting, Weaving, and Cutting (92705)
	Pantograph Engravers (93951A)
	Extruding, Forming, Pressing, and Compacting Machine Operators and Tenders (92971)
92717*	Textile Menders (85956A)
	Embossing Machine Set-Up Operators (92529A)
	Shoe Sewing Machine Operators and Tenders (92723)
	Intermediate Hand Workers (93997)
	Portable Machine Cutters (93928)
	Extruding and Forming Machine Operators and Tenders, Synthetic or Glass Fibers (92708)
	Engraver Set-Up Operators (92529D)
	Shoe and Leather Workers and Repairers- Precision (89511)
	Hand Compositors and Typesetters (89702)
	Marking and Identification Printing Machine Setters and Set-Up Operators (92522B)
92721*	Sewing Machine Operators, Garment (92717)
	Engraver Set-Up Operators (92529D)
	Printers, Hand (93951C)
	Design Printing Machine Setters and Set-Up Operators (92522A)
	Coil Winders, Tapers, and Finishers (93908)
	Casting Machine Set-Up Operators (92529B)
	Musical Instrument Makers, Metalworking (93197A)
	Pantograph Engravers (93951A)
	Plate Finishers (92529C)
	Shoe Sewing Machine Operators and Tenders (92723)
92723	Textile Menders (85956A)
	Sewing Machine Operators, Garment (92717)
	Portable Machine Cutters (93928)
	Marking and Identification Printing Machine Setters and Set-Up Operators (92522B)
	Hand Compositors and Typesetters (89702)
	Hat Makers and Repairers (89599D)

Textile Occupation	Related Occupation Listed in O*NET™1.0 Database
	Shoe and Leather Workers and Repairers- Precision (89511) Hand Weavers (85956C) Sewers, Hand (93923B) Embossing Machine Set-Up Operators (92529A)
92726	Coating, Painting, and Spraying Machine Setters and Set-Up Operators (92951) Coil Winders, Tapers, and Finishers (93908) Casting Machine Set-Up Operators (92529B) Textile Bleaching and Dyeing Machine Operators and Tenders (92714) Photographic Processing Machine Operators and Tenders (92908) Plate Finishers (92529C) Cementing and Gluing Machine Operators and Tenders (92956) Combination Machine Tool Operators and Tenders, Metal and Plastic (91508) Coating, Painting, and Spraying Machine Operators and Tenders (92953) Typesetting and Composing Machine Operators and Tenders (92541)
92728	Shoe and Leather Workers and Repairers- Precision (89511) Typesetting and Composing Machine Operators and Tenders (92541) Engraver Set-Up Operators (92529D) Shoe Sewing Machine Operators and Tenders (92723) Glass Cutters and Finishers (93926D) Sewing Machine Operators, Garment (92717) Cutters and Layout Workers (89908B) Textile Menders (85956A) Model and Mold Makers, Jewelry (89126C) Cooling and Freezing Equipment Operators and Tenders (92928)
**** = This occupation is among the top ten occupations in either SIC Code 22 or 23 in Georgia.***	

While statistical evidence is important for providing an overview of occupational characteristics in Georgia, understanding the qualitative aspects of dislocated workers and employment search processes is aided by interview data obtained from currently operating plants. Several plant managers and/or personnel directors of currently operating plants around the state in the textile and apparel industries were interviewed about the following for their firm:

* how needed skills are advertised in the hiring process;
* how screening is done to assess skills in the hiring process; and
* what the availability of workers is in different skill areas in their firm.

Overall, the opinions of these textile and apparel plant managers and personnel directors suggested that there are few, if any, problems in hiring workers with the appropriate skills in the textile and apparel industries. When difficulties in hiring were cited, the availability of workers with certain skills did not present a problem, but the *competition for workers* in general was cited as a problem. As one plant manager from South Georgia noted when asked to describe the availability of workers for the skill areas required in that firm:

> Right now it's difficult [to hire employees], even though there has been downsizing in the area, there are other companies who are snapping up our workers – textile and non-textile.

This manager gave examples of alternate employers competing for textile and apparel workers, including distribution warehouses and other manufacturing firms. This supports the earlier conclusions that workers in many of the textile and apparel occupations are able to find work in other industries. In another firm that had downsized considerably over the last several years, its vice president gave examples of prior employees working in the service industry in the area. He noted: "We would be able to replace them because of the plant closings and downsizing (at other firms) – I know that many are not happy in their jobs. There are a lot of people in the area…" In fact, as one interviewee explained, hiring workers from downsized or closed plants is desirable due to their knowledge of the industry and work histories, as one interviewee explained. However, based on this same individual's comments, one limiting factor in a firm's ability to hire workers may be more internal than employment market based. The wage rate in the textile and apparel industries is not high. As one plant manager in Central Georgia noted:

> For the women, the plant closings have been a plus for us – they have worked for 10-20 years and they came in the door with knowledge of piece rates and doing that – but when you go to the males, the other plants have had more success in hiring them…the more aggressive workers will go outside the industry – for the majority of women that we employ this is a second job.

In this case, the women are not the sole provider in their household. This same manager described male employees as typically being young, in their late teens and early 20's, with little education.

Overall, based on the group of interviews, the following conclusions may be drawn:

- Jobs are advertised and workers screened in very general terms.
- Due to the low skill requirements of most textile and apparel jobs, firms have little trouble hiring appropriate workers if workers are seeking employment.
- Skilled jobs in the firms tend to be filled by internal promotions, therefore availability in the outside workforce is not relevant in most cases.
- In some cases, women may be easier to hire and retain than men given that most women in these jobs are not the sole provider for their household and pay rates are low.

IV. Analysis of Unemployment and Factors Influencing Re-Employment

A. Plant Closings in Georgia

We used the ES 202 data to identify the location and employment of plants that closed since 1990. First, we identified textile and apparel establishments that closed. The procedure for identifying closed establishments had to distinguish between establishments that closed from those that simply did not file an ES 202 report in a given quarter. Thus, we tracked missing establishments for five quarters. If an establishment did not report for five consecutive quarters, we assumed that it closed. We started with establishments in the two industries that existed in the first quarter of 1990 and considered all closings through 1998. Addresses were not available until the 4th quarter of 1994, and thus the maps showing plant closings include only those plants that closed after 4th quarter 1994. Since a plant could have closed during the quarter in which it last filed its report, in order to measure the loss of employment we used employment in the quarter that is two quarters prior to the quarter in which the establishment no longer appears in the file.

Our estimate of the number of establishments that closed is larger than the number reported by the Georgia Department of Labor in its WARN file. The WARN file is generated from establishments that file, with the Department of Labor, a warning notice of intent to close. Not all firms are required to announce closing and not all of those that are required to file a notice actually do so. Consequently, our list of closed establishments include a substantial number of smaller establishments than the WARN file.

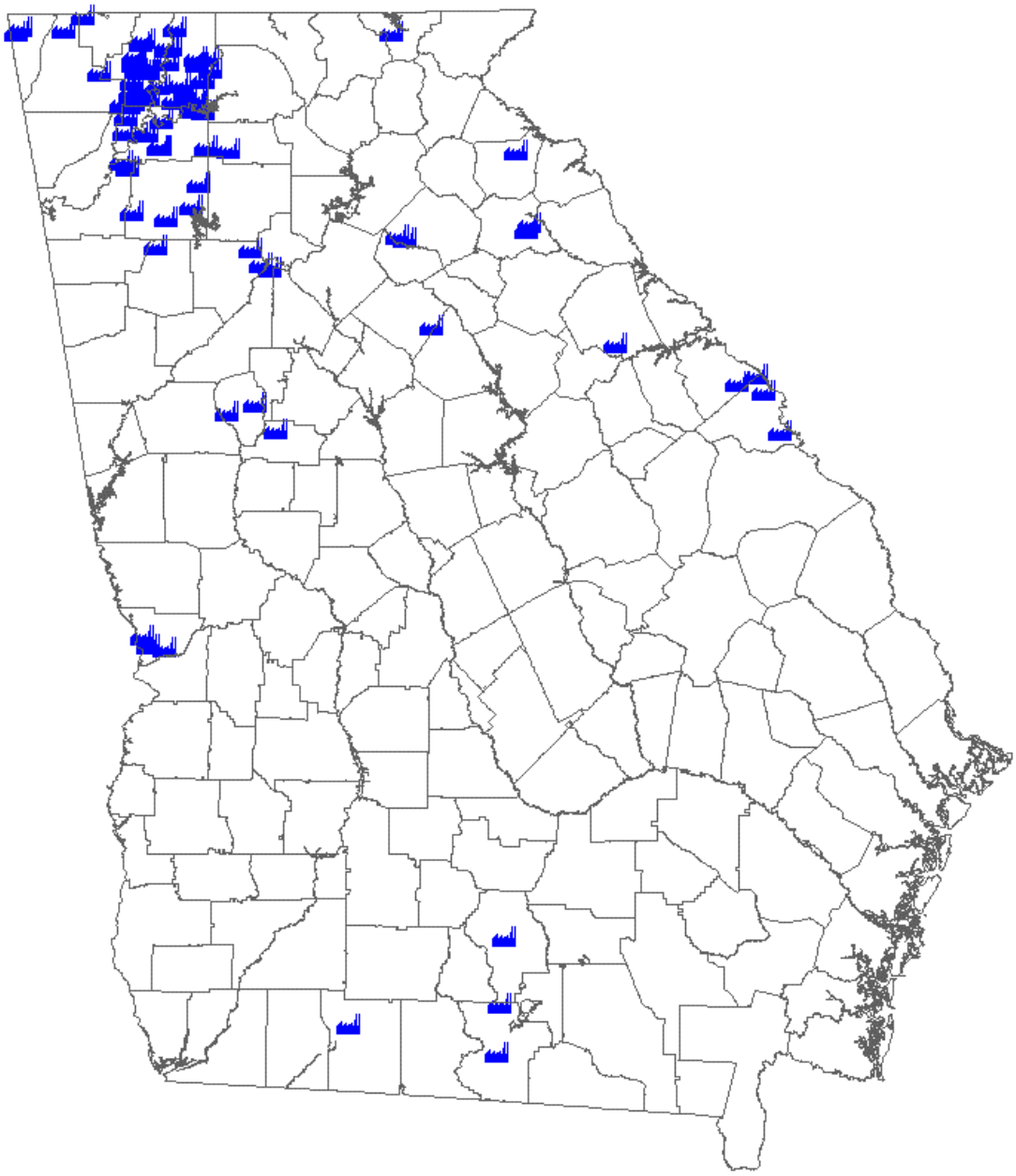
Between 1990 and 1998, we identified 205 establishments in the textile industry (SIC 22) that closed, accounting for 7,762 employees. For the apparel industry (SIC 23), we identified 296 establishments that closed, which accounted for 9,496 employees.

Maps 5 and 7 show the location (by zip code) for establishments that closed between 1994 and 1998, 91 textile establishments and 128 apparel establishments.

MAP 5: TEXTILE ESTABLISHMENTS THAT CLOSED DURING 1995-1998

Total Number of Establishments Closed between 1995-98=91

Total Number of Establishments Closed between 1990-98=205

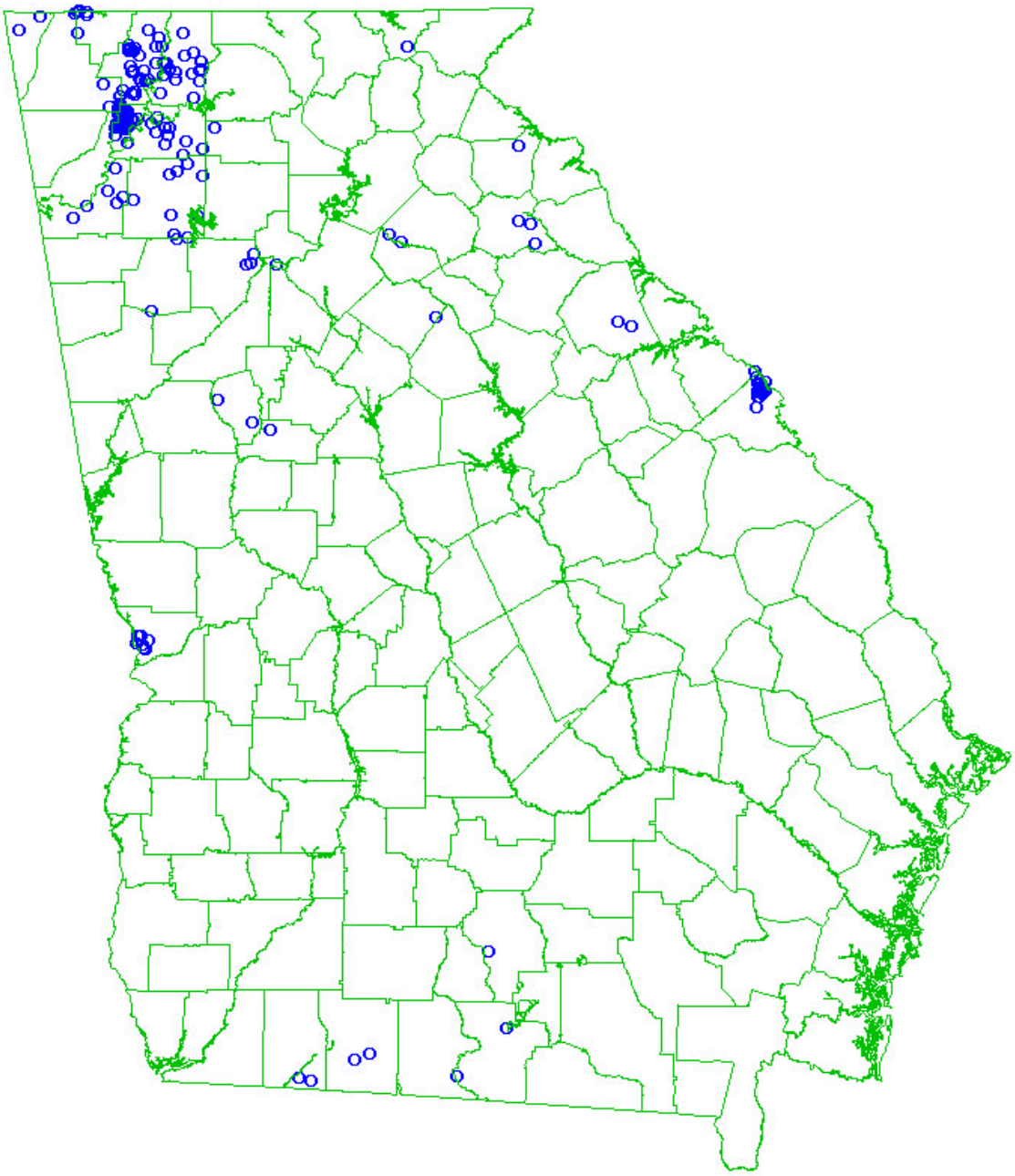


MAP 6: EMPLOYEES IN TEXTILE ESTABLISHMENTS THAT CLOSED DURING 1995-1998

Total Number of Employees Lost Jobs between 1995-98=2,489

Total Number of Employees Lost Jobs between 1990-98=7,762

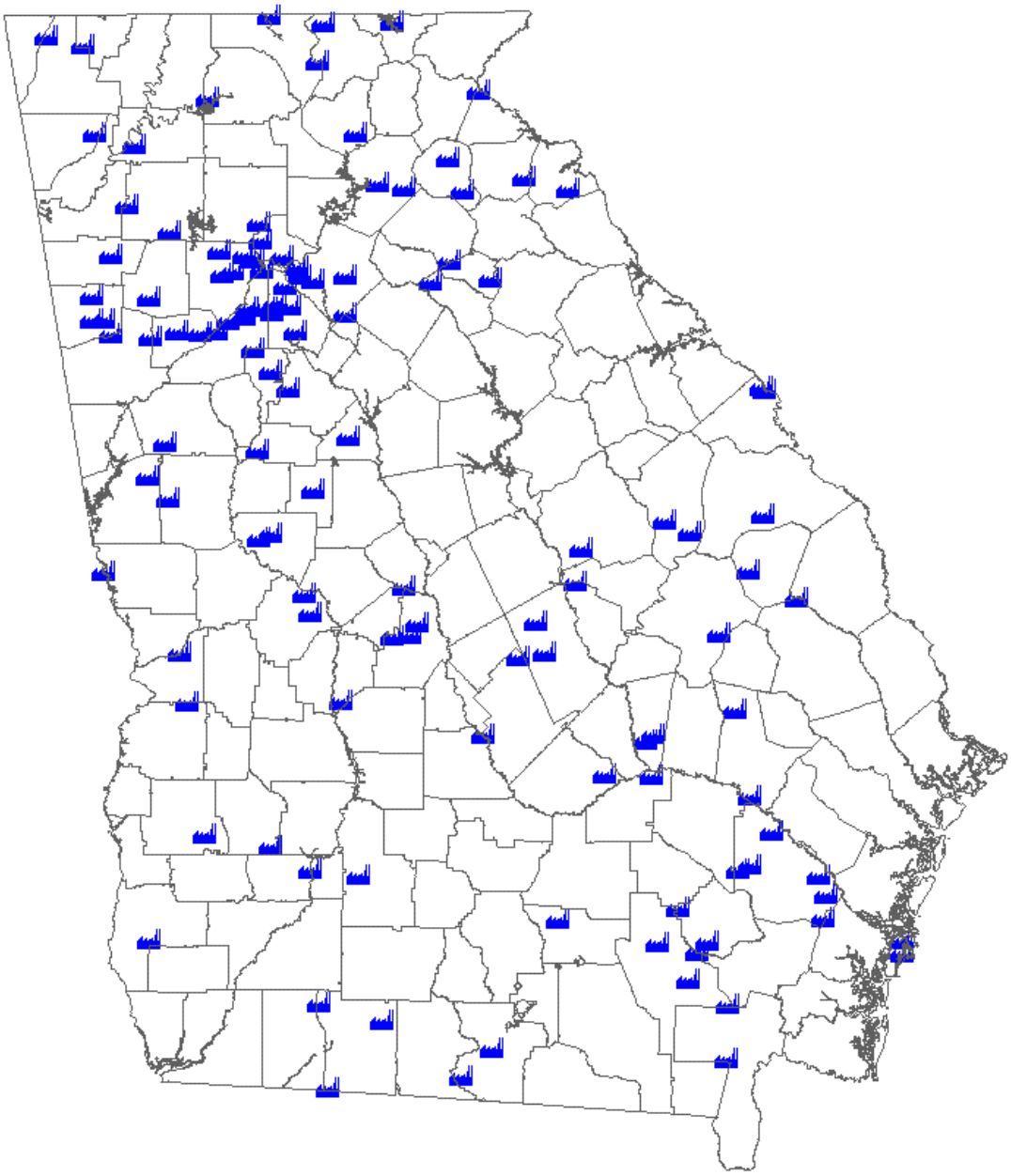
Each symbol represents 20 or fewer employees



MAP 7: APPAREL ESTABLISHMENTS THAT CLOSED DURING 1995-1998

Total Number of Establishments Closed between 1995-98=128

Total Number of Establishments Closed between 1990-98=296

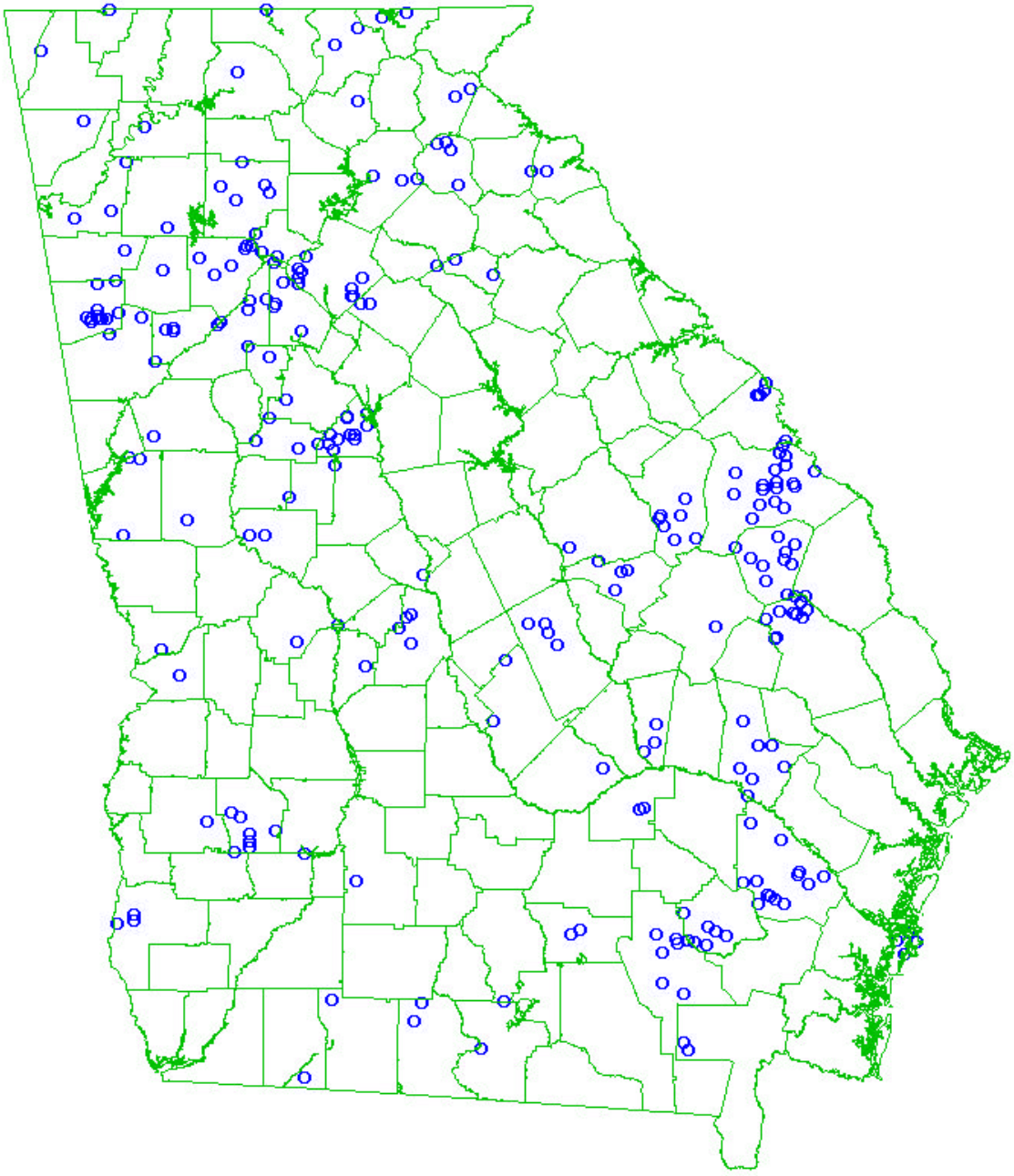


MAP 8: EMPLOYEES IN APPAREL ESTABLISHMENTS THAT CLOSED DURING 1995-1998

Total Number of Employees Lost Jobs between 1995-98=3,982

Total Number of Employees Lost Jobs between 1990-98=9,496

Each symbol represents 20 or fewer employees



The pattern for establishments resembles the geographic pattern of establishment location shown in Maps 1 and 3, but with a somewhat greater concentration in the northwest corner of the state for textiles. Employment loss between 1994 and 1998 (2,489 textile workers and 3,982 apparel workers) is shown in Maps 6 and 8 and follows a similar geographic pattern for actual employment (Maps 2 and 4).

B. Post Closing Employment

We turn to an analysis of information on post-plant closing employment. We focus on the time it took to find replacement employment, the earnings in post-closing employment, and the industry in which new employment was found.

To develop the information in this section, we used the ES202 employee files. We first identified workers in establishments in the textile (SIC 22) and apparel (SIC 23) industries that closed between 1990 and 1997. We then tracked these workers for several quarters after the plant closed in order to determine their post-closure employment and earnings patterns. We can only determine who became employed in Georgia; we are unable to track workers who moved out of state.

Figures 2 and 3 show for the textile and apparel industries, the pattern of earnings' replacement subsequent to a plant closing by the year in which the plant closed. "**Qtr-2**" is the quarter two quarters prior to the plant closing. "**Qtr**" is when the establishment no longer appears in the ES202 file, which means that the firm closed sometime during **"Qtr-1"**. If the establishment closed early in "Qtr-1", then reported earnings in that quarter would be lower than normal. Therefore, we use earnings in "Qtr-2" as the base on which the comparisons are made. The vertical axis is the ratio of earnings in a quarter relative to earning at the closed plant in "Qtr-2". Thus, the graph can be interpreted as the earnings replacement ratio. For example, if the ratio is 0.9, that means that earnings in a given quarter are 90 percent of the earnings in the base quarter (Qtr-2), i.e., earnings prior to the plant closing. These graphs pertain only to individuals who are employed; unemployed workers would have an earnings replacement ratio of zero.

FIGURE 2. TEXTILE REPLACEMENT EARNINGS (SIC=22)

FIGURE 3. APPAREL REPLACEMENT EARNINGS (SIC=23)

The earnings pattern shows a pronounced drop between "Qtr-2" and "Qtr." The drop in earnings however is never less than 60 percent of the base earnings. A sizable number of textile and apparel workers have second jobs, which is part of the explanation for why earnings do not drop below 60 percent of the base earnings. For textile workers, by quarter Qtr+2 workers who found employment have, on average, regained the pre-closure earnings. For apparel workers, by quarter Qtr+1 most workers have replaced lost earnings. Note also the greater variability of earnings replacement across years for apparel workers than for textile workers.

Figures 4 and 5 show the employment patterns of the displaced worker for the two industries subsequent to the plant closing. We start with "Qtr-1", which is the quarter prior to the quarter in which the plant closed. The vertical axis is the percentage of the displaced workers who are employed in each quarter subsequent to the plant closing. A substantial percentage (75 to 95 percent depending on the year in which the plant closed) of the displaced workers in textiles are employed in the quarter following the plant closing. Since the plant could have closed any time in the quarter, the period between the closing of the plant and subsequent employment could be anywhere from 1 day (if the plant closed on the last day of the quarter and the individual found employment the next day, which is the first day of the subsequent quarter) to six months. A somewhat lower percentage (60 to 85 percent) of apparel workers are employed in the subsequent quarter. According to ES202 data, some of these workers had second jobs while employed in the closed plant, and thus are very likely to be employed somewhere after the plant closing. In part, this explains why a substantial percentage of the displaced workers are employed within one quarter of the plant closing. For textile workers, the percent employed continues to fall, reaching 70 to 80 percent two years out. For apparel, there is a large initial fall in employment, followed by a brief rebound. However, the percentage employed then falls.

FIGURE 4. PERCENTAGE EMPLOYED: TEXTILE (SIC=22)

FIGURE 5. PERCENTAGE EMPLOYED: APPAREL (SIC=23)

The data do not allow us to determine why the individuals did not obtain subsequent employment, but there are a number of possible explanations, including: retirement (recall that these workers are older than average); a decision to quit working; the individual went to school or training program; the person left the state and hence is not in the database; or the person could not find employment. The analysis presented below of specific plant closings provide details about the post plant closing behavior of the workers.

Figures 6 and 7 show the industries in which displaced workers are employed subsequent to the plant closing. Since many of these workers hold multiple jobs, we excluded any job in which the displaced worker earned less than 50 percent of his earnings in the closed plant; this still allows for the possibility that an individual will have multiple jobs. The jobs that these displaced workers find are concentrated in manufacturing, wholesaling, services, and retailing. Displaced textile workers who stay in manufacturing are likely to get a job in another textile plant, but displaced apparel workers who stay in manufacturing are not as likely to get a job in another apparel plant.

FIGURE 6. TEXTILE WORKER'S INDUSTRY SUBSEQUENT TO CLOSING

FIGURE 7. APPAREL WORKER'S INDUSTRY SUBSEQUENT TO CLOSING

V. Overview of Current State Programs To Assist Displaced Workers

The Georgia Department of Labor is the state department most involved in assisting displaced workers in the textile and apparel industries in finding new employment opportunities. This section describes the general process of assistance to displaced workers that has been utilized at six Georgia plants that closed or significantly reduced employment in the period 1998-2000. The six plants and locations are: William Carter, Barnesville; Ithaca, Glennville; Levi Strauss, Valdosta; Lindale Manufacturing, Lindale; Forstmann & Company, Milledgeville; and Forstmann & Company, Louisville. The specifics of the strategies did vary from plant to plant, based mainly on size of the layoff and location, but the overall characteristics of the strategies were the same. The Georgia Department of Labor was the catalyst for the response to the layoffs. In five of the six cases profiled, the plant closings were related to NAFTA and thus qualified for special funding to assist the displaced workers. In all six cases the Trade Adjustment Assistance Act was invoked and assistance was forthcoming in addition to the funding from JTPA (Job Training Partnership Act) and various local agencies and providers.

The Georgia Department of Labor is the designated state agency responsible for receiving notices from employers of impending layoffs and business closure. The Federal Worker Adjustment and Retraining Notification (WARN) Act requires certain employers to provide written notification to the employees, local elected officials, and the governor or his designee, 60 days prior to a layoff. In addition, the Georgia Department of Labor (DOL) participates in the Mass Layoff Statistics program which also alerts DOL of layoffs. The Mass Layoff Statistics program is a Federal-State cooperative statistical effort which uses standardized, automated approach to identify, describe, and track the effects of major job cutbacks, using data from each state's unemployment insurance database. Establishments which have at least 50 initial claims for unemployment insurance filed against them during a consecutive five-week period are contacted by state agencies to determine whether those separation are of at least 31 days duration. If so, information is obtained on the total number of persons separated, the reasons for these separations, and recall expectations. The program yields information on an individual's entire period of

unemployment, to the point when regular unemployment insurance benefits are exhausted. Generally, DOL gets alerted by both programs.

In recent years DOL has developed a "Rapid Response Unit" strategy for dealing with plant closings or major layoffs in the apparel and textile industries. This strategy was employed in all six cases studied. The core of the strategy is the Georgia's Worker Adjustment Program. A key element of the program is the partnership between DOL and local Job Training Partnership Programs. DOL's Rapid Response Unit takes on the responsibility of pulling together the various state and local agencies to facilitate the transition of the displaced worker to a new employment status. The Rapid Response Unit provides the following broad range of services which it attempts to put under one roof at a center established on site or very near the plant:

a. Establish and staff an onsite transition/outplacement center. DOL staffs the facility and provides personal computers and direct access to the department's job listings and the Internet.
b. Provide a variety of workshops designed to prepare individuals for a new job, including job search tips and techniques, interviewing skills, resume preparation, and money and stress management.
c. Offer occupational and career information to assist employees in deciding on new careers. Information on retraining and skills upgrading that may be necessary to transition to new occupations is available through the Georgia Career Information System.
d. Workers will also find resource materials, including periodicals and videos on job search, resume preparation, interviewing techniques, salary negotiations, using the Internet for job search, and interest inventories at the center site.
e. Job fairs are conducted on or offsite prior to or following the layoff.

As soon as DOL is alerted to the layoffs, its personnel begin to put together the Rapid Response Unit. The first step in the process is contacting the firm to determine the nature and scope of the layoffs, i.e., whether it is a downsizing or closing and when it will happen. DOL usually establishes a date for a pre-layoff meeting with the employees. The purpose of this one-hour meeting is to provide information to the employees of what is about to happen to them and what will be available to assist them through their transition from employment to unemployment to, hopefully, employment for all of them. The Rapid Response Unit stresses the

process of signing up for unemployment and also describes briefly many of the retraining and re-employment services.

Historically, if the worker-management relationship at a plant was good prior to the layoffs, the relationship tends to remain relatively positive during the lay-off period. A key to helping the workers is the cooperation of the management and the cooperation between the Rapid Response Unit and the various units within the firm. At the William Carter plant in Barnesville, the Center was set up on site in a building to which the workers could walk, and could visit before and after work and at lunch break. The center was named the "Employee Career Center." In this case, the plant management encouraged the workers to take full advantage of the services offered at the center. The Rapid Response Unit establishes a Transition Committee which is made up of 6 workers (and 2 alternates), 2 supervisors, and the human resource manager. This Committee provides guidance to the Rapid Response Unit and lines of communication to the workers in the plant. The committee is particularly important with respect to clarifying what is happening and dispelling distorted or untrue information that might get disseminated. If the workers are unionized, the union plays an important role in the activities of the Transition Committee and in the overall assistance in delivering services to the workers. Only one plant of the six studied was unionized, i.e., Levi Strauss in Valdosta.

One of the key elements in the DOL strategy is to establish a cooperative relationship with the community leaders. Generally, the community team consist of representatives from the local government, including the economic development personnel, local chamber of commerce, area state legislators, and congressional representatives' offices. In most of the cases studied, Georgia's senators and representatives were advised as to the activities going on to transition the workers. In all cases, the level of local cooperation and participation was very high since all of the local constituents had a stake in assisting the displaced workers in getting new jobs as rapidly as possible.

The Rapid Response Unit attempts to put together at the newly established center all of the major providers of services for displaced workers. Key components are the local or nearby office of the Department of Labor, the personnel from the Job Training Partnership or its agencies, one or more of the area DTAE institutions, and

any local training organizations, which may be either public or private. The main purpose of the center is to make access to the providers as easy as possible. The most successful centers, in terms of use by the workers, were those either in or very near the plant.

Once the center is established, the chief task of the Rapid Response Unit is to encourage workers to use the services housed in the facilities. In all of the cases studied, the number of workers who used the center never equaled the number displaced. One of the reasons was that some workers got new jobs soon after the layoffs were announced. However, it is also possible that some were content to take their unemployment and either search later for a job, retire, or simply leave the workforce. In all of the case studies, however, the data which were collected by DOL was for only those workers who registered for one of the information sessions, workshops, seminars or training programs which DOL or one of its partners sponsored. DOL keeps such data on the workers as name, social security number, which sessions were attended, into which education or training programs they enrolled, and if they obtained a new job. DOL attempts to keep track of all the workers who enter its system. However, there are data gaps due to several possible reasons, not the least of which are that the worker moves or drops out of the labor force.

The workers who utilize the center have re-employment information available, and frequently one-on-one counseling in many aspects of determining what new jobs to pursue and how to most effectively search for a job. The counseling normally followed aptitude and interest assessments. Workers who do not have a high school education are encouraged to pursue a GED. This is a particularly critical area of advisement since such a large percentage of workers at most of the plants did not have a high school education. The local DTAE institutions were very active at all the centers. The centers provided them with opportunities to make perspective students aware of their curricula and to advise them on seeking admission. The centers also hold "job fairs" to which various local employers come.

Perhaps the largest payoffs to the center activities were the number of workers who enrolled in getting a GED, enrolled in short-term training programs, and attended more extended programs at the DTAE institutions. There were multiple

sources for the workers in financing their education and training. These sources included the Job Training Partnership Program, HOPE Scholarships, North American Free Trade Agreement Transitional Adjustment Assistance Program, and the Trade Adjustment Assistance Act. The last two sources provide special assistance for workers impacted by jobs moving abroad, although NAFTA requires that jobs move to one of the NAFTA countries. The allowances for training and extension of unemployment are particularly good for the displaced worker.

The Rapid Response Center is designed to stay in operation as long as there is significant demand for the services it provides. Generally, the center remains open from six months to a year, but this depends on many factors, the most important of which is the number of displaced workers. When the center closes, the services are transferred to the providers' location. For instance, the DOL local office handles its functions, while the JTPA has its local provider interact directly with the workers, as does the DTAE institutions. The main difference for the worker is that the center is a "one stop" assistance facility which is very convenient for the displaced worker; when it closes the displaced worker frequently must go to a variety of locations.

VI. Case Studies

This study investigated six recent cases of apparel and textile facilities which were closed in 1998-2000. These case studies were conducted during the first six months of 2000. Of the cases, three were examined in more depth with respect to the process of assisting the displaced workers and in the details developed to profile the characteristics of the workers. The three plants for which characteristics are developed were: the William Carter facility in Barnesville; the Levis Strauss facility in Valdosta; and the Ithaca facility in Glennville. First, the worker characteristics will be described for these three cases, then a case-by-case synopsis will be given for all six of the cases.

A. Some Demographic and Geographic Characteristics

We considered three plants (in southern, rural Georgia) in the textile and apparel industries that were closed in 1999. The closing affected 391 Ithaca employees, 321 William Carter Company employees, and 565 Levi Strauss employees, for a total of 1,277 workers. Table 7 shows the residential location of the workers and the gender makeup.

A spatial analysis of the counties where the laid off workers resided shows that the counties that were impacted the greatest were the counties where the plants were domiciled. Counties that were adjacent to the counties with the closed plants also were heavily impacted, with nearly every county in southern Georgia having some impact from the closures. Most of the workers commuted no further than 45 minutes by car to their work-sites.

Seventy-nine percent of the workers resided in 10 counties but 104 counties had at least one resident working at these plants. The counties with the heaviest impact on worker layoffs and the number of workers laid off are as follows:

Lowndes	454
Tattnall	136
Lamar	100
Upson	77
Liberty	51
Monroe	46
Lanier	38
Evans	38
Emanuel	36
Grady	36
Crawford	34

Over two-thirds (68 percent) of the laid off workers were black, 26 percent were white, with the remainder being Hispanics, Asian or Native American. Eighty percent of the workers were female; twenty percent were male. Twenty-two percent of the men and fifteen percent of the women were below 30 years of age. Twenty-four percent of the men and twenty-nine percent of the women were between 30-39 years of age. Thirty-one percent of the men and thirty-three percent of the women that were laid off were between the ages of 40-49. Twenty-two percent of the men and twenty-three percent of the women were over 50 years of age.

The William Carter Company was located in Barnesville, GA in Lamar County. Lamar County had a 1998 population of 14,706. The plant closing affected 321 workers. Seventy three percent of the laid off workers were black; twenty-seven percent were white. Fifty-five percent of the impacted workers were male, forty-five percent were female. Fifty-three percent of the males and sixty percent of the females were between the ages of 30 and 49. Twenty-five percent of the males and twenty-three percent of the females were less than 30 years of age. Twenty-two percent of the males and seventeen percent of the females were over 50 years of age.

TABLE 7. DISPLACED WORKERS BY PLANT AND COUNTY OF RESIDENCE

	Employee County of Residence	Total Employees	Male	Female
William Carter	Baldwin	1		1
	Bibb	2	2	
	Coweta	1		1
	Crawford	34	15	19
	Dodge	1	1	
	Gwinett	1	1	
	Henry	1	1	
	Jefferson	2	1	1
	Lamar*	100	71	29
	Meriwether	2		2
	Monroe	46	35	11
	Pike	7	4	3
	Spalding	16	9	7
	Talbot	1		1
	Taylor	2	1	1
	Troup	8	1	7
	Twiggs	1		1
	Upson	77	32	45
	Warren	2		2
	Washington	16	2	14
Levi Strauss	Berrien	10	1	9
	Brooks	31	4	27
	Clinch	4		4
	Colquitt	1		1
	Cook	7	1	6
	DeKalb	3	1	2
	Echols	15		15
	Lanier	38	3	35
	Lowndes*	454	44	410
	Quitman	1		1

	Employee County of Residence	Total Employees	Male	Female
	Tift	1	1	
Ithaca	Bryan	4		4
	Bulloch	2		2
	Burke	2		2
	Decatur	2	1	1
	Dougherty	1	1	
	Emmanuel	36	2	34
	Evans	38	3	35
	Fulton	1		1
	Grady	36	2	34
	Jefferson	2		2
	Laurens	1		1
	Liberty	51		51
	Long	21	3	18
	Marion	1		1
	Mitchell	7	2	5
	Montgomery	3		3
	Peach	1		1
	Richmond	2		2
	Screven	1		1
	Tattnall*	136	7	129
	Telfair	1		1
	Thomas	6		6
	Toombs	27	8	19
	Washington	3		3
	Wayne	4	1	3
	NA	2		2
	TOTALS	1277	261	1016

* Location of Plant
Source: Georgia Department of Labor

The Levi Company was located in Valdosta, GA in Lowndes County. Lowndes County had a 1998 population of 85,231. The plant closing affected 565 workers. Ninety percent of the laid off workers were female; ten percent were male. Sixty-nine percent of the impacted workers were black, twenty-five percent were white, six percent were Asian. Seventy-one percent of the males and sixty-six percent of the females were between the ages of 30 and 49. Fifteen percent of the males and twenty-one percent of the females were less than 30 years of age. Fifteen percent of the males and thirteen percent of the females were over 50 years of age.

The Ithaca Company was located in Glennville, GA in Tattnall County. Tattnall County had a 1998 population of 18,975. The plant closing affected 391 workers. Ninety-two percent of the laid off workers were female; eight percent were male. Sixty-one percent of the impacted workers were black, twenty-nine percent were white, six percent were other. Fifty percent of the males and fifty-nine percent of the females were between the ages of 30 and 49. Thirty-seven percent of the males and nineteen percent of the females were less than 30 years of age. Thirteen percent of the males and twenty-two percent of the females were over 50 years of age.

B. Wage Data

One of the issues raised by participates in the debates of the impact of NAFTA and the globalization of the national economies is to what extent are displaced workers re-employed at wages lower than they were previously earning. The discussion in the first section of this report looked at the data for all Georgia textile and apparel plants that closed. Table 8 uses data collected by the Department of Labor on individuals who went through training programs after their loss of jobs. This data is more restricted than the data above and are for only the plants that have been used as case studies. These wage data, however, correspond very closely with the broader sample.

Table 8 shows that in all these cases, workers generally had a reduction in hourly earning, at least at the time of their initial employment after training. The averages in some cases are for a small number of individuals, and thus not too much

TABLE 8. GEORGIA DEPARTMENT OF LABOR OUTCOMES OF THOSE SERVED IN TRAINING PROGRAMS

Company	Total Number Dislocated Workers Enrolled In Training	Average Hourly Wage At Dislocation	Number Completing Training Program	Number Employed At Program Completion	Average Wage of Those Completing Training and Employed
Wm. Carter	3	$8.24	3	1	$6.00
Ithaca	166	$7.52	26	19	$6.20
Lindale	12	$9.85	12	9	$7.85
Forstman	82	$8.80	47	21	$7.80
Levi	629	$10.50	106	32	$9.88
Total	892	$9.77	194	82	$8.22

much weight should be placed on any specific case. The data are also affected by the fact that some of the workers who are undergoing training may not have been employed as of the date the data was collected.

C. Six Cases in Profile

1. The William Carter Company, Barnesville, Georgia

The data from the Rapid Response Report shows the following interesting facts. Date of the WARN letter was August 17, 1999 and the first employer meeting was held on August 19th, followed by the employee information session on August 31, 1999. The total number of workers affected was 469 and their skill levels were in production: sewing machine operators, fabric cutters, and material handlers. Fifteen percent of the workers were over 55, and 85 percent were high school graduates or GED's. Less than five percent of the workers had computer literacy.

The Business Closure/Layoff Contact Inquiry Report shows that the average duration of service for the workers was 25 years; 90 percent of the workers were hourly employees; and the average hourly wage was $9.18. The major counties of residence were Upton and Lamar counties. The William Carter Company did not close all of its facilities in Barnesville, it continues to operate its warehouse and distribution center. Some workers who were laid off in the sewing operations took positions with the company in its other operations.

The organization and agencies involved in providing services to the displaced workers were the Flint River Technical Institute, Griffin Technical Institute, West Georgia Private Industry Council, the Georgia Department of Labor, Griffin Office and the Georgia Department of Labor -Rapid Response Unit. The Career Center was opened on October 6, 1999. The center provided a full range of services including employee surveys, job search workshops, career awareness workshop, and the establishment of a Transition Assistance Center. Of the 221 respondents to the "Dislocated Worker Questionnaire," 103 said they would look for a job in the same type of work while 118 said they would not. The average wage they said they would accept in a new job was $8.15. Thirty eight said they would be willing to drive 5-10 miles to work; 100 said 10 to 20 miles; 67 said 20-30 miles; and 39 said more than 30 miles. Of the respondents, 49 indicated they were interested in a GED, 91 in occupational training, and 82 in upgrading their skills.

Approximately 85 percent of the affected workers actually participated in Rapid Response activities. The funding sources for the activities were JTPA Title III, HOPE Scholarship, Pell Grants or Loans, and the Trade Act and NAFTA. The outcomes of the Center activities as of March 15, 2000 are as follows:

800 utilized the Career Center (multiple visits average four per person)

150 were referred to training

58 were accepted into training

125 attended job fair

234 attended job search workshops

181 unemployment claims filed of the 469 workers affected

73 found other employment

47 transferred to other positions within the company

6 retired

125 are still working at the plant

54 quit

The Rapid Response Unit and the other committees had an employee newsletter and made various other worker contacts through the media, flyers, mail outs, and telephone campaigns. The Career Center closed at the end of February, 2000.

The overall assessment of those involved in delivering the services to the workers was that the William Carter plant at Barnesville was a good example of community, business, and state agencies co-operating to address an important problem in the community.

The center was located on a site which was extremely convenient for the workers to stop by before, after, or during work. William Carter's management gave full support to the Rapid Response Unit by providing free space and utilities. The human resource director encouraged employee participation in the center activities. This was an important element in the strategy to get workers actively involved in helping themselves find new employment. The HR director was contacted and she reported that she thought the transition was as smooth as it could have been under the circumstances. She particularly praised the Rapid Response Unit and its partners.

The DOL personnel at all plants studied felt the workers who had been working at the same plant for many years were slow to face the realities of unemployment. Repeated reminders of the services available to assist the displaced workers were necessary in all plant closings. According to a writer with the *Barnesville Gazette*, some laid off workers remained very depressed and did not participate in the Center workshops or training programs. Among those who did participate, several got CDL licenses and went into truck driving. Others left the apparel industry and sought employment in other industries. The companies which recruited at the Job Fair included Quad Graphics (printing), Refrigerator Co., Duracell Battery, Cabinet Makers, and some trucking firms. Some workers reported to the writer that the layoff forced them to get the GED and to pursue other career options, which they may not have done if the plant had not downsized.

The William Carter workers had, as do many other apparel employers, a high percentage of workers without high school diplomas and with a very low range of job skills. Both characteristics helped determine the kinds of training programs that were offered. Lack of a high school education limited the numbers of persons who could be admitted to degree or certificate programs.

2. Levi Strauss, Valdosta, Georgia

Levi Strauss manufactured jeans at their facility in Valdosta. It had 871 workers who were affected by the decision to close the plant, which was announced in February 1999. The reason given for closing the plant was strong competition that forced Levi Strauss to move its operations to Mexico and Canada.

Levi Strauss was located in a fairly large community of Lowndes County. The community has a relatively low unemployment rate, but the job opportunities available are very dependent on the education and transferable skills of the displaced workers. As in some of the other plants studied, a relatively high percentage of workers did not have high school diplomas and many workers had low literacy skills. The plant was a unionized plant. All the parties -- business, union, community and Department of Labor personnel -- formed a close working relationship to assist the workers. The Chamber of Commerce played a key role at the community level.

One factor that sets the Levi Strauss case apart from the others studied is the fact that the company set up a very good severance package. The company paid eight months salary from the date of announcement and then provided severance to the employees depending on their seniority. Additionally, they paid $500 to each employee who stayed with them to the date of separation. Finally, each worker got $6,000 for tuition, to buy computers, or as venture capital to start their own business.

Since the Rapid Response Center was still open when we conducted the interviews, the available data are more limited than in the other cases. The Center has been in two locations and is currently off-site in the downtown area of Valdosta. To date, about 457 of the Levi employees have had occupational training or are involved in the GED program. There are currently 80 people still in the GED program, which is important for eligibility for other degree or certificate programs.

As noted above, each Levi employee had a fund of $6,000 which could be used to enhance their employability. A high percentage of the workers bought computers. Because of this, Valdosta Tech offered a series of mini-workshops on the use of the computer. Attendance at these workshops was about 417 people. In addition, Valdosta Tech enrolled 283 Levi workers in their technical training programs, including computer information systems program. An individual associated with Valdosta Tech said that the greatest drawback Tech has with plant closings is the low level of education and literacy among the apparel workers. His experience has been that it is tough to get the apparel workers into for-credit programs because of their lack of a high school diploma or equivalent. He estimated the percentage without diplomas in apparel to be as high as 40 percent, compared to about 25-30 percent of the population in south Georgia. His assessment of the assistance provided to the Levi workers by all parties, particularly DOL and the local partners, was "outstanding."

An individual with Valdosta-Lowndes County Chamber of Commerce was struck by the fact that some former Levi employees opened their own businesses, and made note of four such start-ups:

1. passenger van service;
2. day care center;
3. mobile care wash;
4. silk flower arrangements firm

The individual also observed that the unemployment rate in Valdosta and Lowndes County was only about 2.5 percent. In that person's assessment, the Levi workers were good and reliable workers and the best of them would have little problem in finding another job. The individual felt the center had provided a wide range of services, many of which were one-on-one counseling, and said the transition for the workers was "as painless and seamless as anyone could have wanted."

3. Ithaca Industries, Inc., Glennville, Georgia

The Ithaca Industries' plant, a manufacturer of boy's and men's T-shirts, reportedly closed due to foreign imports. There were 390 employees at the plant, all

of whom were laid off. Since Glennville is such a small town, the closing of this plant had significant impact on the economic well-being of the community. The response of the DOL was essentially that as described above in the general section and in some detail in the William Carter case. The community was quick to respond to the need to establish a broad-based effort to transition the workers as rapidly as possible to new jobs. It was hoped that at least some would find jobs in the local community. The community found space in an old telephone building for a "One Stop" Rapid Response Center and helped to get it up and running. DOL provided the equipment and furniture needed beyond local contributions.

Of those laid off, about 150 have enrolled in GED training. In addition, 23 are in an English as a Second Language (ESL) course. The worker population at Glennville ranged from local people who walked to work to spouses of military personnel at Fort Stewart. The training programs were set up in three shifts due to a shortage of training personnel relative to the large number seeking training. One aspect of community and mutual support by co-workers was the willingness of fellow workers or community people to take care of children while the workers were in training. In some cases this child care continued when a laid off worker was re-employed but outside the community.

As of the time of this study about 86 of the Ithaca employees had found jobs, some of them before the plant closed. However, almost all are outside of the community and many people have to travel to Vidalia, Statesboro, or Savannah to work, all of which are 35-50 miles from Glennville. Some workers had hoped to be re-employed at Ithaca's Vidalia plant but it is scheduled to close.

The fact that potential jobs were so far away and that many of the workers did not have cars was of great concern for all those involved in finding new jobs. The Regional Development Center in the Glennville area got in touch with the Georgia Department of Transportation. With the support of the local legislators and other community leaders, they signed an agreement to lease vans from DOT so that van pools could take workers to other locations for work. The riders will have to pay the cost of gasoline and some rental fee, but the insurance and some of the driver's salary is to be provided by the county. Several of the displaced workers applied for the drivers' positions.

The JTPA contract training organization was Job Trainers Unlimited. This organization provided the general and specialized training to prepare workers for new jobs. The GED programs were conducted by Southeastern Tech. The center offered the full range of programs on stress management, budget management, resume preparation, and job search skills. The Director of Job Trainers Unlimited says she stressed to the displaced workers that "no door closes that a window doesn't open up." She praised the strong community support for finding jobs for the displaced workers.

An individual with the Greater Tattnall Chamber of Commerce echoed the same observation about the transition team. However, he related the fact that two other employers in the community were closing their doors, which made it almost impossible for displaced workers to find jobs in the community. This had significant short and potentially long-term financial consequences for the town of Glennville. (The other employers are Tam Industries and the local hospital.) He commented on the cooperation between the state and local officials in trying to attract new industries into the old facilities and to encourage the building of new facilities. The only prospect to date has been another textile company which the leaders fear is not a good long-term development prospect. He noted several concerns about loss of jobs in the community: transportation problems, lack of high school education, child care, and health insurance for the workers. From the community's perspective the closings were having significant impact on the community's public finances, including support for the schools and maintenance of the community infrastructure.

4. Lindale Manufacturing, Inc., Lindale, Georgia

The Lindale Manufacturing company manufactured denim fabric. It was a unionized plant and the union and company notified DOL of the closing in January, 1999. The number of workers affected was 520. The workers were mainly unskilled textile workers, of whom 85 percent had high school or equivalent education and only 10 percent of whom were older than 55 years. The average number of years of service with the company was 10 years. The Business Closure/Layoff Contact Inquiry provides the information that 95 percent of the workers were hourly wage earners and the average wage was $10.00.

The institutions involved in the process to transition workers from unemployment to employment were: the Georgia Department of Labor Rapid Response Unit; DOL's Rome local employment office; Georgia Department of Human Resources; Coosa Valley Regional Development Center (JTPA's Sub-state Grantee); Coosa Valley Technical Institute and; the United Way of America.

The Rapid Response Center in Lindale was the first of the center concept to be used in Georgia. The center concept had been developed elsewhere in the United States and was only beginning to be implemented when the Georgia Department of Labor used it with its Rapid Response Unit. The success of the center at the Lindale Manufacturing Plant resulted in the Georgia Department of Labor doing several national presentations on implementing the center concept. It used all of the means of reaching out to the affected employees to get them to utilize the services of the center.

The Center performed a full range of services as described above in the general description of Rapid Response centers. The site of the "Worker Transition Center" was the UNITE Union Hall. The union provided the space and utilities and the company granted release time to employees who were members of the Transition Assistance Committee. The relationship between the union and the company was good, and all parties were co-operative in working together. Approximately 85 percent of the affected workers participated in Rapid Response activities available either through the Center or the area service providers. The outcomes were reported as follows:

211 employees were employed after layoff

134 enrolled in training

25 were recalled

49 retired or were on leave

66 were receiving unemployment or not working

The remaining individuals (35) are unaccounted for and are persons who neither filed for unemployment nor registered with employment services.

5. Forstmann & Company, Inc., Milledgeville, Georgia

The number of workers impacted by this plant closing was 650. The owners of the plant, which manufactured worsted fabric, determined that the plant was no longer profitable due to competition from foreign imports. The DOL was notified of its closing on May 15, 1998.

The average age of the employees was 40 and the average education was 12 years. The workers average years of service was 15 years, the average salary of employees was $8.50 per hour, and the major job functions were weavers, spinners, twisters, and clerical.

The company was very co-operative in helping set up the center on-site and the company heavily publicized the center services. The local DOL office was only two miles away but it was felt the Rapid Response Unit would be most effective if the services were on-site. The local veteran DOL personnel were moved on-site and additional people were hired to staff the local permanent office. The Macon Technical Institute, was proactive by bringing its services to Milledgeville.

This textile facility differed from the others studied in that it generally required a high school diploma or equivalent to be employed. This fact, and that the GED program was offered off-site, explains why few workers enrolled in a GED program.

The inclusive dates for measuring the impact of state and local programs was from March 15 to November 30, 1998. In that period there were 42 employee meetings. The outcomes were as follows:

223 people attended job search workshops

92 attended financial/stress management workshops

151 obtained occupational training

41 took GED training

372 used the Transition Center

351 became employed

This plant closing did not qualify for NAFTA financial assistance because the plant was moved to Honduras rather than a NAFTA country. The closing did qualify for Trade Adjustment Assistance Act funding, as well as other training and education grants.

6. Forstmann & Company, Inc., Louisville, Georgia

This plant closing went less smoothly than those described above in the sense that the plant management was in transition. This made getting good co-ordination among the various participating groups more difficult and reduced the effectiveness of advertising services and stimulating the workers to take advantage of the assistance available to help them to find new jobs. Although the plant manager at the time of the plant closing announcement was anxious to have a center, the manager was transferred shortly after the closing was announced. DOL had to go into the community to rent space for the center and provide all the funding for the center's equipment and furniture. The new management did not provide any time off for the workers to take advantage of the center services which, with the distance to the center, made the number of visits less than in cases where the center was on-site.

Another factor in this case was the "local" DOL office was over 30 miles away in Dublin, Georgia. Once the center closed, the workers were some distance away for DOL support. In addition, the technical facilities were provided by Sandersville Technical Institute whose main facilities were also some distance away. Sandersville Tech, however, was very supportive and attempted to service all the needs of the displaced workers seeking vocational training through its programs.

The number of workers laid off was 175. The notification date was November 20, 1998. The profitability of the firm was impacted by low cost of foreign labor, particularly in Honduras and the Dominican Republic. Like the Milledgeville plant, the average hourly wage was $8.50 and the average education was 12 years. The average duration of service was 20 years. The job functions of the laid off workers were identical to the Milledgeville plant. The center was opened on February 10, 1999 and closed when the plant closed. The outcomes of the center activities were as follows:

VII. Findings from Other Studies of Plant Closings

Assisting dislocated workers has been a policy issue in many states and localities. Other experiences from the past and from areas outside the state provide lessons and findings that are useful in developing policy responses to the decline of the textile and apparel industries in Georgia. For this report, case studies of plant closings and dislocated workers were examined for findings and lessons learned. Additionally, other research conducted on this topic was also examined. The

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FIGURE 8. PRINCIPLES OF BETTER PRACTICES IN MANAGING LAYOFFS

1. Early warning systems to identify potential layoff conditions.
2. Human resource planning systems that focus more on redeployment of manpower than on permanent layoffs.
3. Honest direct and empathic communications with employees about layoffs.
4. Proactive stance in identifying employees who would benefit from assistance programs, coupled with uncomplicated sign-up procedures.
5. Early identification of plant-specific layoff problems and design of interventions tailored to address those specific problems.
6. Involvement of displaced employees in the design and implementation of worker assistance programs.
7. Social support programs geared not only to decreasing psychological distress but also to generating commitment for an extended job search.
8. Financial assistance programs that provide extended benefits, protect pension plan funding, and take advantage of available government and entitlement funds.
9. Outplacement programs that include skills assessment, training in job search skills, job referral services, and job support services.
10. Training programs that focus employee' attention on the need for change in their careers, and provide instructional programs geared to individual needs.
11. Survivor assistance programs that rebuild psychological commitment to the firm and sustain productivity levels.
12. Corporate-level financial assistance to plants in managing downsizings, coupled with corporate-level safeguards against short-term expedient actions that undermine long-term strategy.
13. Social responsibility stance toward local communities and concrete actions to minimize the adverse impact of layoffs in those communities.
14. Cooperation in delivering assistance to displaced workers with governmental agencies, unions, community action groups, and local educational institutions.

Source: (Feldman and Leana, 1994, page 252.)

based on a study of the following six firms that experienced layoffs and two additional groups that have taken a leadership role in how layoffs are managed in their communities:

- General Electric
- UAW-GM Human Resource Center
- Institute for Survey Research, University of Michigan
- Stroh Brewery Company
- Duracell, Inc.
- International Business Machines
- United Steelworkers of America
- Steel Valley Authority

In addition to the conclusions drawn from the cases described above, it is useful to consult existing research on displaced workers and worker retraining. This literature addresses various aspects of displaced workers and firm layoffs and offers lessons that may be useful here. Specifically, from this research (see Appendix for a list of these studies) the following conclusions have been drawn about effective layoff and displaced worker management. Overall, the literature addresses the importance of retraining and education. Our review found that:

- Training is important and even necessary for many workers so that they may transition to other industries.
- Training should not be limited to vocational training, but should also include basic math and communication skills.
- Assistance programs to enhance the job search skills of displaced workers are essential.
- Public agencies should supply job vacancy information, but should not restrict it to the local labor market.
- Training in small business startups was best targeted at more educated displaced workers and was best suited for workers who had been out of work for only a short time.

VIII. Policy Recommendations

Based on the analysis conducted for their report, 10 policy recommendations were developed.

A. Education

The one concern echoed by everyone interviewed for the case studies is the need to address the problem of the lack of education of the workers in the textile and apparel industries. Since the forecast is for the loss of an additional 4,000 to 6,000 jobs in these industries in the next six years, it seems advisable for the State of Georgia to address this problem. One recommended approach is to notify the current workers without high school diplomas to begin to prepare for the potential job loss in the near future. The approach should be to advise them of where and how to achieve the GED and the potential consequences if they fail to do so. Several of the trainers say the trend is for employment to be predicated on the applicant having a diploma or equivalent or they will have to get it within some prescribed time frame (currently one year). In the past, employers would not follow through on their threat of firing the worker who failed to get the GED, but more recently, employers appear more serious about requiring this qualification for employment or continued employment.

This strategy would help the worker prevent getting caught unemployed and without a high school education. New funding may be necessary to try to solve the problem since currently funding is not activated until the worker is displaced. One interviewee said that the optimum way to encourage employees to get the education is to have the classes conducted where they work and with time off to attend classes if they lead to a GED. This strategy would require both money and a cooperative management. This problem is probably not restricted to the textile and apparel industries, but would also apply to other low education, low skill workers in Georgia.

B. Training

Another recommendation is for training to be conducted in a variety of skill enhancing programs which workers could take and complete within in a relatively short period of time. These programs should be targeted to workers who are high risk

for future unemployment. The obvious benefit would be that the courses may shorten their transition time between jobs should they be laid off.

C. Health Insurance

Health insurance is a big problem for laid off workers. Although many workers were offered insurance as individuals, it was generally felt it was far too expensive for many, if not all, to take advantage of the offer. The recommendation is to have some kind of state subsidized health insurance as the worker transitions to a new job, which hopefully, would have health insurance.

D. Transportation

Transportation was considered a problem in several of the cases. In many cases, the worker's most likely new job was many miles from her/his residence. In one case, Glennville, the local community and the Department of Transportation addressed the issue by entering a leasing agreement for vans to get workers to jobs. This model should be explored for other locations in Georgia.

E. Coordination

Better coordination between the agencies which are helping displaced workers find jobs and the agencies working to create new jobs is another recommendation. Some agencies are aware that new plants may be opening and have information with respect to the skill requirements for the new jobs. This information would be helpful in advising displaced workers as to which skills they should attempt to acquire. The coordination should extend to having as comprehensive a list of job openings as is possible which can be used to expedite the job search process.

F. Child Care

Day care for displaced workers who either need time for education or training or who have to move to night shifts or distant jobs for employment is a pressing need in most locations. In some of the cases the displaced workers set up mutual child care assistance, but it was only temporary to permit training time for the parents. Longer term care is a larger problem.

G. Public Finances

In one case, Glennville, the local government is facing a serious shortfall of funding if new employers are not attracted. The local concern is for funding schools and general government services as well as maintaining the community's infrastructure. If these plant closings reduce the employment by significant percentage, the recommendation would be for the State of Georgia to look at the possibility of temporary subsidies for the community while the community transitions to new economic realities.

H. Personnel

The Georgia Department of Labor initially was experiencing a shortage of personnel to respond to the demands on the Rapid Response Units. This need is being addressed under the Commissioner of Labor, and it is noted here in order to encourage continued support for the concept of the Rapid Response Units which will require an adequate number of personnel to meet not only the needs of the textile and apparel industries, but other plant closings in Georgia.

I. Follow-up

One area in which more personnel would be needed is in the follow-up elements of the programs described above. This would involve data collection and analysis, including direct contact with the workers who were served. The purpose of these efforts would be to further assess the effectiveness of the existing programs and to assist in designing new programs. One possibility would be "user friendly" materials for displaced workers. Another might be to assist in the encouragement of workers to get a GED, as described above.

It should also be noted that not one of the persons who was involved in this study has perceived the problem as being one of inadequate funding. All those interviewed felt there were adequate resources available under the various programs that were in place during the period 1998 through July 1, 2000. It should also be noted that the organization and funding for some of the programs have changed as of July 1, 2000.

J. Jobs In Other Industries

From the occupational data it is clear that for most textile and apparel jobs in Georgia jobs with similar skill requirements exist in other industries, many of which are growing. Assistance to displaced workers should take this into consideration and assist workers in exploring jobs across industries.

APPENDIX. CASE STUDY AND EMPLOYMENT

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